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THE

AMERICAN FARMER,

CONTAINING

ORIGINAL ESSAYS AND SELECTIONS

ON

AGRICULTURE, HORTICULTURE,

RURAL AND DOMESTIC ECONOMY,

AND

INTERNAL IMPROVEMENTS;

WITH

ILLUSTRATIVE ENGRAVINGS AND THE PRICES OF COUNTRY PRODUCE.

JOHN S. SKINNER, EDITOR.

"O fortunatos nimium sua si bona norint
"Agricolas.".............VIRG.

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"O fortunatos nimium sua si bona norint
"Agricolas."................................Virg.

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AGRICULTURE.

ON THE CULTURE AND PREPARATION OF COTTON FOR MARKET.

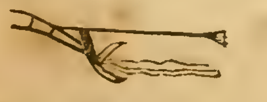
Waqua, Brunswick Co. Va. Jan. 27th, 1825.

Every thing said on the subject of Cotton, is daily becoming more interesting in this part of the country; added to which, many invitations have been given through your valuable paper, that planters should communicate their experience on this subject; therefore, no other apology is deemed necessary for the few remarks which I now offer you.

I do not know that I shall say any thing either new or interesting, but as my remarks may correct some erroneous opinions entertained by a few, and be a guide to others, who are as yet inexperienced on the subject of the cotton crop, they are offered with the hope of either communicating information to the inexperienced, or eliciting intelligence from the more skilful and better informed.

Seed.—An opinion is expressed in the American Farmer, vol. 3, page 237, that the rot is propagated by the seed, and that it may be avoided by selecting seed from plants not affected. This I think is an error. The first year I planted a crop of any extent, (for I have cultivated it in the small way ever since I have been a farmer,) I procured the seed from a gin about 25 miles distant from my farm, and in a neighbourhood every crop of which was affected with the rot. My first crop, in 1822, entirely escaped it. I do not think that one single pod was rotted. The crop of 1823 was, in some places, almost entirely destroyed;—the crop of 1824, less affected. From these facts, I cannot believe that the rot is propagated by the seed. An opinion prevails in North Carolina, that the rot proceeds from defective seed, which, when planted fresh or new, will vegetate, and that by keeping the seed to be one or more years old, these seed lose their vegetating principle, and that none come up but such as are perfectly sound. By this means they obtain vigorous plants, and think their crops less affected with the rot than they were before this practice was commenced. The result of this practice is as yet uncertain; it appears plausible, and deserves experiment. Certainly the more sound the seed, as in all other crops, the better.

Mode of planting.—The preparation of the land and the mode of planting varies much in different neighbourhoods. Some bed up on the old bed, after first splitting it open with a large trowel hoe—some flush their lands, and then bed it up by one or two cuts of a mouldboard plough on each side—some cross these beds at the distance they intend the plants to stand, and deposite the seed in the checks. My experience and observation recommend the following plan—Flush up your land as if intended for corn; open a furrow by one cut of a trowel hoe plough, at the distance you wish to plant; spread your seed in this furrow, and then cover it by a plough, without any hoe, with two boards attached to the helve and extending forwards; thus,

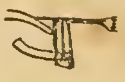


With an implement of this kind you cover the seed with great facility, and by this mode of planting you preserve a fresh surface, all important, by preventing your land from washing into gullies—by diminishing the loss of moisture at this critical juncture by evaporation, for the more uneven the surface the more rapidly it dries; and by facilitating the culture of the crop after it is up, which will appear under the head of culture.

Time of planting.—This should vary with the latitude and distance from the seaboard. In more southern latitudes they may plant much earlier than we do in Virginia; but a person living near the seaboard in Virginia, say at Williamsburg may plant as soon as a Carolinean living at the distance of 150 miles from the sea. I reside about 40 miles from the Carolina line and about 150 from the seaboard, and in my vicinity, some begin as soon as the first week in April, others later. If I could deposite all my seed in one day, I would prefer about the 10th of May. One of my neighbours, last year, failed in a crop of wheat, on a small lot of land. He ploughed it up in May, and planted it on the 22d of that month—its produce was more abundant than any other part of his crop. By planting late you avoid the risk of planting your crop over twice, which would, at that busy season, be a serious loss, and the further risk of having your crop stunted in its growth, by late frost or even cold weather, from the injurious effects of which it is slow in recovering. By planting late, the seed vegetates soon—the plants come up with a vigorous growth, which they retain to their maturity, if properly managed afterwards.' A cotton planter should plant his corn early, have every thing in preparation for the expeditious planting of his cotton, and by beginning about the 25th of April will finish in good time, if he have a full crop, say five acres to each labourer—if his crop is less, he may begin later. I speak of the southern part of Virginia.

Distance and thinning.—The greatest distance generally between the rows is 4½ feet, and the shortest is 3. Some crowd a great many plants on an acre, having the rows left only 3 feet apart, and leaving the plants only 4 or 5 inches apart. This may answer on very thin land, but will be destructive on rich land. The distance should vary according to the fertility of the land. Upon rich tobacco land, I would advise about 5 feet by 12 inches. The plants should never be so crowded as to interlock across the rows; for, thereby you impede the facility of gathering, and exclude the sun and air, important to all crops, but more so to cotton than any other. I made more than 1000lbs. per acre, from a lot planted 5½ feet by 18 inches, and where there was any irregularity in the distance it exceeded 18 inches. A good general rule is, to give it distance one way and crowd the plants the other, to that distance which will afford stocks enough for the strength of the land. Last year I saw a piece of rich second low ground, by the admission of the proprietor, an advocate for thick planting, much injured by being planted too thick. The rows were 3 feet 4 inches apart, and the stocks left 6 inches apart in the rows;—he determined to give it much greater distance in his next planting. May not the rot be promoted by the greater humidity preserved in the field by a crowded growth of plants?

Culture.—This should begin, as soon as the plants are well up, with three or five tooth harrows, or trowel hoe ploughs, cutting once on each side of the plants and so near to them as to destroy some, thereby aiding the operation of thinning. After having gone over the crop in this manner, the business of thinning going on at the same time, but after the plough. The next working should commence with trowel hoe ploughs, having on each side of the triangular helve a short mould-board, (A, see next page,) not more than 1½ inches wide and curving; thus,



so attached to the helves, as to shovel up a little earth to the plants. The hoes should follow the ploughs to cut away the grass, or remove it by hand, if any should be left. After this, the hoes may be discontinued altogether, except to remove the few weeds or bunches of grass which may be left after the last ploughing; but scarcely any will ever remain, if the ploughing is well done. The ploughing should be repeated two or three times more, and at every repetition, lengthen the mouldboards a few inches, so that a little more earth may be thrown up at each ploughing to the plants. By repeatedly throwing up the earth to the plants, you smother the young grass which comes up about them, and hill the cotton at the same time, two important objects attained by the same operation. Hence one of the great advantages of planting on a flat surface. By planting on high beds, you are obliged to clear away the grass with hoes, thereby increasing the labours of hoe culture, and this cannot be done without drawing away some of the earth from the plants, which never fails to injure its growth. I have heard some experienced planters say, that you might increase your crop by planting in checks at the distance of 3½ feet by 18 inches or 2 feet, and leaving two or three stalks in each check. By this means you are enabled to give one ploughing the narrow way, and thin out the cotton with more expedition, as which, no part of the management of the crop is so tedious, except the gathering.

Rot.—This is too well known to all cotten planters, to need any description. Much has been said respecting the causes which produce it, but as yet all is vague conjecture. I have observed in my crops, that those spots not hitherto cultivated in cotton, were less injured by it than any other parts. I am inclined to believe it proceeds in some cases from a sudden check given to a rapid flow of sap, produced by causes as yet undiscovered. I suggest the following as probable means of diminishing its ravages. The seed should be thoroughly dried, or kept until they are old. Shift your land—keep it free from grass; but never accelerate its growth by too much culture—give access to the sun and air, by the distance you plant.

Topping.—The beneficial result of this, is as various as the experiments have been numerous. Many experiments have been made within the circle of my acquaintance, and the results differing. Some gentlemen, whose veracity is unimpeachable, have informed me, that they have attended the gathering and weighing, and that there was no difference in the product of the topped and untopped cotton; while others, equally respectable, have assured me, that the topped cotton yielded a much greater crop. The topping is performed at different seasons; by some, as soon as the 15th of July, in which case it may be beneficial, but increases the labour, by creating the necessity of removing the suckers, a very tedious operation;—by others, it is procrastinated until the last of August, after which no suckering is required. Topping at this season is most expeditiously performed, with long knives, or with bits of old scythe blades inserted into pieces of wood which serve as handles, by the labourers walking briskly along and chopping off as much of the top as is thought redundant. The late topping I cannot believe will add any thing to the crop, but it is serviceable in removing leaves which would be in the way of gathering, and admitting more sun, thereby accelerating the maturity of the crop; for, although the cotton will all be opened before it can be gathered, yet the earlier it opens the better, as pods more widely expand when they open early, which much assists the gathering; and topping may further be serviceable, by curtailing the draft upon the fertility of the soil.

Gathering—Should commence as soon as the cotton begins to open: for let the planter be as industrious as he may, the winter will far advance upon him before he can finish, and will nearly expire, if he have a full crop and be without extra hands to assist. The morning's gathering, for the first month at least, should be scaffolded for a half day. Some hands in this part of the country pick out 158lbs. a day, but such cases are rare—an average of 50lbs. a day is thought good; however, the average should exceed that weight until the middle of November. Some planters are in the habit, and it is recommended to all, of weighing the gathered cotton once or twice a day, and keeping a book in which they set down against each labourer's name the weight gathered. The benefit of this course will be readily perceived without any further observation—and further of stimulating the exertions of the labourers by occasional premiums. This plan is highly advantageous. There is no crop in which so much can be lost by negligence and indifference as in cotton, or which can be so easily concealed; nor is there any in which so much depends on practice and habit. By premiums you afford exercise in industrious exertions, excite pride and emulation, and what is most important, lighten the weight of labour by the playful cheerfulness with which the task is performed.

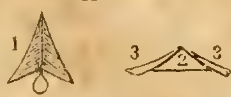
Ginning.—This should go on *pari passu* with the gathering, by which means the planter may get his crop early to market. This is doubly important, as it enables him to embrace any advance in the price of the article, and gives him the early use of the fruits of his labour. Great care should be taken to prevent the motes from mixing with the cotton, as a few will much injure the sale of the crop; and much greater care should be extended to the preservation of the staple, upon which the value of the article mainly depends. This can be regulated only by the structure of the gins and the velocity with which they run. The ribs which divide the saws should be wide, 3-4 of an inch or more, the teeth of the saws fine, and the velocity of the saws should not exceed two hundred and twenty revolutions in a minute. The staple is apt to be injured by narrow ribs and coarse teeth, and too much velocity will certainly *chop* it. Carver's gins, manufactured near Boston, are the best I have ever heard of; but they are too costly for our limited crops in Virginia and Carolina. A Mr. Miles, of Northampton county, N. Carolina, makes most excellent gins; but his manufacture is unequal to the demand. Davidson, of Mecklenburg county, N. Carolina, manufactures extensively, and his gins are cheap—2$ per saw. The only difference between Miles' and Davidson's gins, is, that Miles' have a mote box in the rear of the ribs, and they are made in better style; but they cost 1$ per saw more than Davidson's, a sum more than equivalent to the greater perfection of the gin. If he would extend his manufacture, embrace the advantages of a division of labour, he might preserve the perfection of his gins, and reduce his price, even below Davidson's. Nothing is wanting but greater competition, to bring down the price to $1 per saw, which would be fully equal to the value of the labour expended on them. One of Davidson's 50 saw gins, with two horses, will pick from three to four thousand weight per day. The only experiment I have made with the one I have in use, picked 2000lbs. in 5½ hours, and this without any effort to increase the rapidity of the work, except the addition of a second horse, for most commonly I work it with but one. It has been recommended to sun the seed as fast as the cotton is picked, for reasons appearing under the head Seed.

Packing.—The most common practice, in this part of Virginia, is to pack it in round bags, six feet long, with iron or wood pestles. This is a tedious business, as a hand will not pack more than a bag a day, the weight of which is generally 350lbs. Some pack in boxes, called square, of unequal dimensions. 4 feet long, breadth and depth 3 feet by 18 inches; others impress it into these *square* boxes by screws. In this part of the country, we are much at a loss for the best mode of packing, and some of your southern correspondents would render an essential service by communicating the cheapest and most expeditious mode of putting our cotton into square bags. There are several disadvantages attending the round bags, some of which I will here enumerate:—The loss on bagging, more cotton being generally put into 4 yards of square bags than into 6 yards of round bags—the loss of carriage to market, a wagon getting along with difficulty and danger, carrying 2400lbs. in round bags, and can with ease carry 3200lbs. in square bags—the loss on round bags from upsetting the wagon, which often happens, and on our neglected roads is almost unavoidable, and the greater extent of the bags exposed to rain. In both cases, either by soiling the bags with mud or wetting with rain, the planter is sure to sustain a loss, for the merchant "*knocks* off" so much for mud and so much for water, generally taking off as many pounds as there are ounces added by either of these causes. For some time a ¼ or ½ cent more per pound was given in the Petersburg market for cotton in square bags; but I do not believe that that difference is made at present. One great advantage of square bags is, that more of the load is taken into the body of the wagon, which does less injury to it, and in a measure prevents its upsetting.

I have recently heard of, *in this part of the world*, a *new* mode of packing, although I have heard it spoken of as being *old* in others. It is effected by a chain of great substance attached, one end to a piece of timber, say 14 inches square and 18 feet long, lying horizontally upon rollers, the other end to an upright windlass, which is carried around by a 30 feet sweep. As this turns it winds up the chain, which thrusts the end of the piece of timber against a block, called a follower, and thus forces the cotton into the end of a box, which also lies horizontally. The box is 4 feet deep and 18 inches wide. The cotton is driven into the last 3 feet of the box, which is confined by clamps, and opens. After the chain is wound up, the clamps are removed, and the bag sewed up, which finishes the business. I have been informed, that two hands will pack six bags a day, with a machine of this kind. I wish I could give you a good drawing of this machine, as I expect my description will afford but an imperfect idea of it. If you, or any of your correspondents, know any thing of it, you will oblige us by some better account of it. I would here ask you, or through you, of the superintendant of the patent office, whether or not any patent has been granted to any person for *any* machine to pack cotton, and if any, what they are.

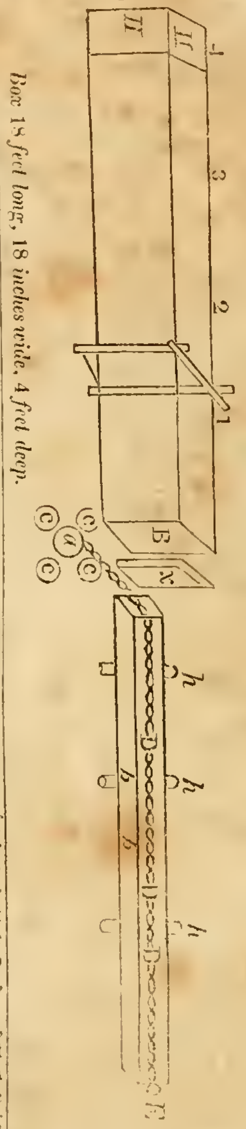
I shall below attempt a drawing of this packing machine, which if you can make intelligible by an engraving, may be added.

A



1. Trowel Hoe.
2. Base of helve.
3. 3. Mouldboard—6 inches long, 2 wide and curving

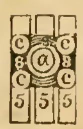
Fig. 1.



1. 2. 3. 4. Clamps, such as is represented at 1.
H. End of box, into which the cotton is pressed.
B. End of box into which the follower *x* is driven by the beam *b*.
x. Follower.
b Beam, 18 feet long.
h h h Rollers.
a Upright windlass, 18 in diameter.
c c c c Large posts confined by pieces as is represented by 8 8 8 8, in fig. 2 and 3.
D Chain attached to windlass *a*, and to beam *b*, at end E. The last 8 feet of chain next to E, should be links of iron 1½ in. diameter; 1 in. will break with ease.

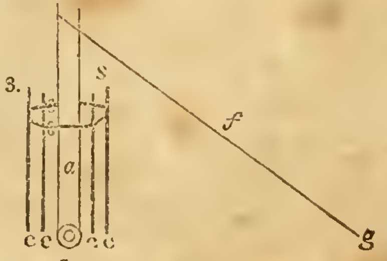
c c Represents the position of the windlass and posts.
a
c c

Fig. 2.



Represents 3 large pieces of timber, 5 5 5, upon which to set the windlass and posts, c c c c, 8 8 8 8 represents wide pieces to hold the windlass in an erect position.

Fig. 3.



The windlass in an erect posture.
f The sweep with the end g, 30 ft. from the windlass at *k*.
S A brace.

Cotton and Wheat, a mixed crop.—An opinion prevails, that these two crops cannot be grown together, with any success, on the same farm; nor can they, as wheat has been usually cultivated in this part of Virginia; wheat generally succeeded corn. About the 1st of October, after the fodder is secured, all hands are employed in clearing the field of the corn, and seeding the wheat. This operation generally requires the whole force of hands and horses until about the middle of November, by which time the most important season for gathering cotton has passed. With a full crop of cotton, even upon this plan, a small crop of wheat may be made; but by fallowing a field, either spring or summer, for wheat, a full crop of both may be made, and these additional important advantages will result;—the wheat crop increased, by being seeded on a fallow, the corn crop be improved, by being planted on a stubble field; you avoid the cut worm, and cultivate the crop with greater ease. The only thing necessary, is to begin the change and reverse the rotation. 1st, wheat; 2nd, corn; 3rd, oats, or rest, the one or the other, as these may be, three or more shifts.

After having completed the business of fallowing, and crop ploughing, if the fallow be in the spring, commence seeding your wheat about the 20th of September, being prepared with a drag or harrow, having 20 or 25 iron teeth, to every pair of horses on the farm, and by employing two, three or four hands, as the situation and extent of the farm may require, you will complete the seeding of your wheat in ten or twelve days. This will be a very inconsiderable loss of labour from the gathering of the cotton crop, and when compared with the advantages you reap, will not be estimated any loss whatever.

Manuring for Cotton.—We have applied our manures to very little permanent advantage, in the south of Virginia; some change is necessary. I have applied my manure, after lying in heaps for forty or fifty days, to the cotton land, in the following manner. Having prepared the land to receive the seed, I spread the manure, broad cast, on the surface, drop the seed and cover them, as directed under the head of planting. This operation covers but a small portion of manure, and much the greater part continues on the surface during the growth of the crop. Farmers need not be apprehensive of this plan;—I have tested its value. The losses from evaporation are far less than are generally apprehended. The crop will be better, and the effects of the manure more lasting. I am satisfied from my experience, that all manures, to all crops, should be applied on the surface of the land, and shall continue to pursue that course. If my future experience should prove it erroneous, I will apprise you of it.

Thus, sir, I have given you all the information I possess, on the article of cotton, collected from my own experience, and my intercourse with many intelligent and experienced cotton planters. I now put it under your entire control, with a hope that you will excuse the hasty, crude and undigested manner in which it is communicated.

Believe me yours, very respectfully,

THEO: FEILD.

THE VALUE OF THE OX—OVER THE HORSE.

Loudon County, Va., March 14th, 1825.

John S. Skinner, Esq.

Sir,—A writer over the signature of "C." in the 49th No. 6th vol. of the American Farmer, "On the relative value of oxen and horses for the general purposes of Agriculture," I think has done that valuable animal, the ox, great injustice; and as far as my feeble ability and slight observation will go, I will endeavour to correct him, believing his errors originate from want of observation in animals properly broken. As to the extract from "Baily's Survey of Durham," I shall pass by that, and go on to where he says, "when the comparison is fairly made, the horse is far superior to the ox in intelligence, spirit, &c. &c. —provided there be an increased allowance of food." As to intelligence, I think the ox possessed of fully as much as the horse, because you may put a yoke on him, and he will go to the right or to the left, at the command of his driver, without either bridle or line. But how is it with the horse? You must have a strong bridle and line, and then it is with difficulty you can manage him. For activity and extraordinary exertions, in a short time, the horse is evidently superior. He next speaks of the quantity of work done by oxen, &c. In this county, I have known six oxen to a wagon, go in company with a five horse team about six miles, and hauled fifty bushels of unslacked lime over a very rough and hilly road, and kept in company with the horse wagon, having as much lime as it.* This has been frequently performed, and in warm weather. I have also known them to haul logs in company with horses two and three miles, for several days at a time, and perform the distance in the same time the horses would; and horses that are in the habit of making a trip to Alexandria and returning a distance of forty miles in four days with 15 and 16 barrels of flour; and those oxen but seldom had more than one day in seven to rest, and never were fed on grain. These facts are known by numbers.

The oxen which your correspondent speaks of that "refused to draw," and "dragging the harrow at a snail's pace," were evidently badly broken; for therein lies the great secret of having good oxen. If when they are first put to work, they are made to walk fast, they will always continue it; and if, on the contrary, they are made to walk slow, you can never afterwards make them go faster; therefore, the proper way to break them, is to have two yoke of well broken oxen, having a proper walk—put one of these to the tongue of the carriage—then put the yoke of young oxen to be broken, next before them, and the other yoke of well-broken ones before them, in which situation the young ones are obliged to keep in their proper place. They should not be too much fatigued at first, as is too often the case, and then they are made to walk slow, which produces the effect above stated. They should neither be very fat, nor very poor, when first put in the yoke, and not in warm weather.

But the principal advantages of the ox, are; the cheapness of his food, as he very seldom has any thing but hay and pasture; also "that the harness is so very economical."†

A horse will consume, upon an average, two bushels of rye or corn per week; which is 101 bushels per year, which, at fifty cents per bushel, is fifty-two dollars per year for his food, more than for that of an ox;‡ and I insist on it that six oxen can do more work on a farm than four horses, and by which there is a saving in the food of nearly two hundred dollars. But on a farm where four horses can do all the labour, I would not advise having any oxen, as I think it is necessary that every farmer should have some horses; but where that number is not sufficient, I would certainly recommend oxen, more especially where the principal part of the labour is done by slaves. Upon a large estate, where horses are used altogether, the gear is a very important item, as to economy; the facility of gearing and ungearing the ox is much better suited to the genius of the negro and the place of depositing it, (in a fence corner) for the ox yoke and the best horse gear generally share the same fate as to the place of deposit.

As to their performance—Joseph Lewis, Esq. of this county, has a bull that works in shafts, and so docile that a small boy can manage him perfectly well. This animal has frequently hauled a ton of plaister from the mill on the farm, and is made use of for hauling stone to make stone fence, in which situation it is supposed he hauls from 12 to 15 hundred pounds.

SANDY.

IMPROVED SHORT HORN AND HEREFORD CATTLE;

Great match between them decided in favour of the Short Horns.

A controversy has raged in England for some years, between the advocates of these two breeds of cattle. As far as we have seen, the decisions have preponderated decidedly in favour of the Short Horns. At last the two parties appear to have concentrated their pretensions and hopes on the issue of a great match between Mr. Champion, as the champion of the Short horn stock, and Mr. White, as the champion of the Hereford breeders. So great was the excitement, as to warrant the former in sending his heifer, "Miss Points," two hundred miles to the show; and so great was the excitement, as is stated by the editor of "*Fleming's Weekly Express,*" from which we got the account, that it occasioned an assemblage of Agriculturalists more numerous than had ever been witnessed on any former occasion.

These matches between the Hereford and Short Horns, have been going on for three years, at Sir Charles Morgan's annual Cattle Show, at Tredegar The first year, the prize was taken by Mr. Champion's heifer, Attraction; the second, there was *no decision*, owing to, as we have been well convinced, no want of superiority in the animal exhibited by Mr. Champion, but to unfair deportment in his

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*At Harewood, Mr. Oliver's farm, 16 miles from Baltimore, we have seen a pair of young half-blood North Devon oxen going, with several horse and mule teams, turn and turn about, bringing in loads of turnips, from a field 1½ miles distant, through the whole day. In states where slave labourers and overseers without humanity, prevail, the capabilities of the ox ought not to be pronounced upon; but let the enquirer go, as we have done, into Massachusetts, where the labour of the farm is done by the owner and his children, or by white labourers, whose subsistence depends on their humanity to the farm beasts, as well as on their skill and industry in the use of them—where all operations are graduated by the scale of economy; and then he will be able to estimate what the *ox can do.* He will there find him taken early into training; kept up through the year; fed on dry food, and curried and cleaned as horses; and when brought out to his labours, perfectly docile, tractable, and more intelligent and exactly attentive to all that is said to him, *concerning his duties,* than some biped labourers. A New England farmer will talk to you of his *oxen,* and take pride in showing them to you, but he never speaks of his horses. He knows the horse to be an expensive machine—often consuming more, before he is ready for labour, than he would then sell for; liable at all times, to get easily out of order, and requiring expensive tackle of every kind.—*Ed. Am. Farmer.*

†A Connecticut farmer, present, says that a yoke of their oxen, seven feet in the girth, plows generally 1½ acres per day, and hauls never less than a ton in the cart. But our correspondent seems to omit another point of economy—that is, that the ox seldom dies, as the horse often does, by accident or disease—when worn out, he is fattened and consigned to the pickling tub, and even his *hide* is more valuable than that of the horse.—*Ed. Am. Farmer.*

‡On this point we apprehend that even our New England friends are to learn a lesson of economy in the preparation of food. We expect to show, before long, the practicability of preparing all food for domestic animals, by *steam,* at a saving that is almost incredible until taught by experience. Mr. John Patterson, of Baltimore county, keeps in the best heart, more than 30 head of horses, cattle, &c. at an expense which he calculates not to exceed 3 *cents per day* each! Let the reader ruminate on that, until we give him the details.

[*Ed. Am. Farmer.*

competitor. The third year resulted in the victory won by Miss Points.

This splendid animal was bred, as we learn by our private correspondence, from the same cow as White Rose, the heifer imported by the Editor of this journal, and now owned by Col. Lloyd; and was got by Mr. Champion's celebrated bull, Aid-de-camp, which took the premium offered by the Board of Agriculture, at their exhibition at Smithfield, London. See American Farmer, vol. 4, pages 102 and 232. Aid-de-camp is the son of Warrior, the sire of White Rose, and has been sold for a very high price to the Marquis of Exeter, who takes many prizes, and appears by the English papers to be a very spirited and most successful breeder. His Short Horns are generally of Mr. Champion's breed; fine samples of which may be seen at Albany, in the possession of Gen. Van Ransellear, who gave to Mr. Champion, for a bull and two heifers, imported last summer, $1000, in Liverpool, and some at Powelton, near Philadelphia.

TREDEGAR.

SIR C. MORGAN'S CATTLE SHOW.

This exhibition, equally interesting and advantageous to the public, took place on the 21st inst. Notwithstanding the unfavourable state of the weather, the increasing importance of the meeting, and, on the present occasion, the intense curiosity which was universally entertained to learn the result of the long pending contest for usefulness and excellence betwen the improved Short Horns and Herefords—promoted an assemblage of Agriculturalists more numerous than had been witnessed on any former occasion. Twice had this question been already contested; in the first year, favourably to the Short Horns; in the second, no decision had been made; and curiosity was raised to the highest pitch respecting this the third. Mr. Champion's Short Horned heifer, on whose appearance such high destinies depended, had however been seen on her journey of two hundred miles from Nottinghamshire, and had given rise to doubts and fears, which induced many persons to remain at home, divining the issue of the battle from afar. Respecting that issue we shall hereafter speak; it may suffice in this place to observe, that Sir Charles Morgan's excellent arrangements rendered the bad weather of little consequence. The cattle stood, and were inspected in comfort; and the judges, who were indefatigable in attention to their duty, alone suffered from the unpropitious elements. The gentlemen appointed to decide on the merits of the animals exhibited, were,—Mr. Jolliff, of Long Ashton, near Bristol; Mr. Coomer, of Bristol; and Mr. Betterton, near Cirencester.

PREMIUMS.

The several Premiums were awarded as follows:

For the best yearling Bull, North Devon breed, to Charles Morgan, Esq.

——— best 2 year old Heifer, do. do.

——— best yearling Bull, Short Horned breed, to the Rev. H. Berry.

——— best 2 year old Heifer, do. to Sir. C. Morgan.

——— best yearling Bull, Hereford breed, to Mr. John White.

——— best 2 year old Heifer, do. to Mr. Caruthers.

——— best yearling Bull, Glamorganshire breed, to Mr. M. Thomas.

——— best 2 year old Heifer, do. to R. Jones, Esq.

——— best yearling Bull, any breed, cross breed excepted. This premium, intended to bring all the previous winners together, was most numerously contested, and won by the Rev. H. Berry's Short Horned Bull, *Wharfdale*, (by Mr. Bate's *Enchanter*, out of Mr. Whitaker's *Miranda*) sixteen months old.

——— best 3 year old Heifer, do. to Mr. Colling.

——— best Ram Lam, to C. Leigh, Esq.

For the best pen of four Ewes, to C. Leigh, Esq.

——— best pen of four fat Wethers, to R. Jones, Esq.

——— best Southdown Ram Lamb, to the Hon. Booth Grey.

——— second best 2 year old Short Horned Heifer, to C. Leigh, Esq.

——— best yearling Scotch Bull, to Mr. William Fotheringham.

——— best 2 year old Heifer, do. to Samuel Homfray, Esq.

——— best 3 year old Steer, of any breed, to Sir C. Morgan, for his Short Horned Steer, sold by auction for 56*l.*

——— for second best yearling Short Horned Bull, to Sir C. Morgan.

——— for the best field of Turnips, not less than 5 acres, to Sir C. Morgan.

The Sweepstakes for 2 year old Steers, entered into by Sir Charles Morgan, Mr. Champion, and Mr. Berry, having failed to induce competion on the part of the Hereford breeders, no exhibition of these animals took place.

The Sweepstakes of ten guineas each, five subscribers, for the best yearling Heifer, was won by Mr. Champion's Improved Short Horned Heifer, aged 17 months, beating Mr. White's Hereford Heifer, aged 20 months. This being the most interesting part of the exhibition, and involving important considerations, we shall be excused for remarking upon it somewhat fully. It was the opinion of two of the judges, and Mr. Champion gave his assent to the proposal, that resort should be had to the scales, in order that their opinion in favour of the Short Horned might receive additional corroboration. But to this course Mr. Betterton, the third judge, and Mr. White, objected. We have, however, been favoured with the admeasurement of the two Heifers, taken by a respectable and disinterested gentleman, and also a calculation founded upon it, with the correct principles of which our Agricultural friends are acquainted.[*]

Mr. Champion's Heifer measured in girth behind the fore legs, 6 feet 7 inches; in length, from the fore upper corner of the shoulder blade bone to the hindmost part of the rump, 5 feet. The given weight by this admeasurement is 52 stones of 14lbs. to the stone. Mr. White's Heifer measured in the same way, in girth 6 feet 1 inch; in length 5 feet; and by a similar calculation her given weight was 45 stones. From the foregoing statement, it appears that Mr. Champion's Heifer nearly averaged 43lbs. per month, and Mr. White's Heifer, also nearly 32lbs. per month. To show the difference in point of profit in these two animals, it may be remarked, that there are 11lbs. per month gained by the Short Horn more than by the Hereford, which, taking them both at 17 months old, which is the age of the Short Horn, amounts 13 stone 5lbs.; but, calculating the Short Horn to gain 43lbs. per month, which she has already averaged, for 3 months longer, which would place her on an equality as to age with the Hereford, she would then have gained 9 stone 3lbs. which, added to 13 stone 5lbs. before specified, makes the astonishing difference of 22 stone 8lbs.;[†] this, calculated at a very moderate price for prize beef, say 8d. per lb., will make upwards of ten guineas difference in favour of the Short Horn, for 20 months' keeping.

Mr. Champion's Heifer, *Miss Points*, (properly so named from her extraordinary excellence in those parts which render a beast valuable to the grazier, butcher, and consumer), was a magnificent specimen of the Improved Short Horns; she was got by his bull *Aid-de-camp*, her dam *Young Tulip*, by Mr. Mason's *Charles*.

The business of inspection being concluded, the company adjourned to the King's Head Inn, Newport, where they sat down, in number 116, to a most excellent dinner. After the cloth was withdrawn, and his Majesty's health, with other loyal toasts, had been given by the worthy Baronet, he proceeded to distribute the several premiums, accompanying them with appropriate remarks and encouragement to the fortunate candidates. Lord Rodney, Sir Frederick Heniker, and many other gentlemen, came forward in the most liberal manner with offers of cups for the ensuing meeting; but we were sorry to observe no great promise of farther sweepstakes. In the course of the evening, however, Mr. Berry addressed Sir Charles Morgan to the following effect, from which we entertain hopes that we shall still witness new and useful competitions:—

"Sir Charles, permit me to trespass on your attention, while I execute a commission with which I have been charged. The present, it must be admitted, is a period fraught with satisfaction to the breeders of Short Horns—the events which occurred at Smithfield, and those which we have witnessed to-day, reveal the sources from whence it is derived. Those events will, it is hoped, place the despised Short Horns (despised only where they are unknown,) in that rank in public estimation which they are entitled to possess. To increase, if possible, the conviction now entertained of their merit, is my object in addressing you. I have in my hand a letter from Mr. Rennie, of Phantassie, in Midlothian, proposing to stake a large sum upon a *trial between the Short Horns and Herefords;* and though I should wish the stake dispensed with, I do not feel justified in bringing forward the proposal in any other terms than those in which I received it. Mr Rennie wishes to produce three Steers of the Short Horned breed against a like number of Herefords, to be matched as calves, for 500 guineas. Guided in his practice as a breeder by the principles of utility and profit, Mr. Rennie rejects fanciful distinctions, and proposes that this match shall be decided by reference to those important points. Should any gentleman feel desirous to accede to Mr. Rennie's proposal, I will communicate his wishes to that gentleman, who will then proceed to make his own arrangements."

To this proposal no reply was made. After an evening spent in the greatest harmony, Sir C. Morgan's firmness having prevented a repetition of the disagreeable contention which occurred last year, the party separated, highly gratified with the manner in which they had spent the day, and looking forward with pleasurable expectation tu the next meeting.

ON THE SAGACITY AND USEFULNESS OF SPANISH SHEPHERL'S DOGS.

By JOHN HARE POWELL, ESQ.

Powelton, 1824.

DEAR SIR,—One of the most serious obstacles, to the improvement of sheep by the introduction of costly individuals, is the difficulty of guarding them against the attacks of their natural enemies, the various races of sporting, and cur dogs.

The first importations of Merino sheep, were accompanied by some of the large, and powerful dogs of Spain, possessing all the valuable characteristics of the English Shepherd's dog, with sagacity, fidelity, and strength, peculiar to themselves. The important uses, to which they are applied, render them the objects of great care among husbandmen, on the continent of Europe. In some countries, where the boundaries of different proprietors, are often designated, but by a stone or small ditch, they are stationed, as faithful sentinels, to guard the flocks from attack, and to confine them to their proper grounds Their ferocity when roused, by any intruder; their attachment to their own flock, and devotion to their master, would, in the uncultivated parts of America, make them an acquisition of infinite value, by affording a defence against wolves, which they readily kill, and vagrant cur dogs, by which our flocks are often destroyed.

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[*] Reference is here made to a mode of ascertaining the net weight, by measuring the animal alive, as particularly explained with a diagram in the American Farmer, vol. 4, page 185.

[†] By this calculation, to which no objection can be urged, Mr. Champion's Heifer will give upwards of twelve hundred pounds, net beef, at *two years old!*

The force of their instinctive attachment to sheep, and their resolution in attacking every dog, which passes near to their charge, have been forcibly evinced upon my farm.

A blundering labourer carefully confined, with all my flock in the fold, one of my dogs from a Spanish bitch, by an imported blood hound. He lay perfectly quiet, until dislodged by an old ewe, although his sire was so ferocious towards all animals, as to make it necessary that he should be killed. In other instances he shows the savage temper of the blood hound—even towards the man by whom he is fed.

I am aware, that in England, dogs are not now much used upon enclosed lands—the more quiet races of sheep having been so generally introduced, as to make the services of the little animal, which in Great Britain had been generally employed, merely in keeping together the flocks, not sufficiently important, to compensate for the disquiet occasioned by his restlessness and noise. As much difference exists between his habits and those of the grave shepherds' dog of Spain, as in the temper of the heavy English mastiff, and that of a fretful cur.

I am, very respectfully, yours,

JOHN HARE POWEL.

Jonathan Roberts, Esq.

President of the Pennsylvania Agricultural Society.

Extract from Parkinson on Live Stock.

The sheep-dog is so essentially necessary and useful to the shepherd and the drover, that it merits a place in this treatise. Various kinds of dogs are made use of for shepherding, as almost any dog may be taught to serve this useful purpose; but there is one particular breed which seems naturally the best adapted, viz. a rough sort, with very long soft hair, and distinguished by being without tails. Their colour is black, or blue, with a white ring round the neck, a bald face, and the belly and feet white. These dogs, although they appear similar, as to colour and make, vary in size, and seem the one to suit the shepherd, the other the drover. The dog of the largest size stands as high as a sheep; thus, when his teeth are broken in a proper manner, he can take a sheep by the ear, and, from his weight and strength, hold it without injury: this the smaller sized dog could not do; but he seems nimbler, possessed of a more fiery spirit, and not so liable to tire; however, in folding pasture sheep, he appears to be too busy, and to chase the sheep more than is necessary: the former, therefore, is the most proper for the shepherd.

The county of Dorset lays claim to this breed of dogs; and they are certainly to be found more generally in that county than in any other: but they are most frequently seen in Smithfield, attending the London drovers. The hair of these dogs is a necessary protection against the severity of weather, as they have to lie by the fold side during many cold days, while the shepherd is dressing the flock. There is also a small sheep-dog, long in the body, and short in the leg, with strong hair upon him; some of this breed are red, some black, generally having white about the neck and face: they are to be found in Westmoreland and Cumberland. These dogs are so wonderfully sagacious, that it is well authenticated they know the brands of the sheep, and will select their master's sheep from others, on parts of the mountains inaccessible to man. For this service, they are better formed than the breed before mentioned; as a large dog, on those rocky mountains, would be liable to fall down the precipices, not being so sure-footed as those smaller short-legged dogs.

In some parts of Lincolnshire, there is a strong large dog, larger than either of those before described, somewhat like a sort which is termed the house-dog: some of these dogs are possessed of wonderful sagacity. The shepherd who superintended my flock at Skegnest, and had the care of upwards of 4000 sheep during the summer, in above 40 pastures, had one of this breed; the dog's name was Ball. About twelve o'clock in the day the shepherd, or one of his sons, would say, "Ball, it is time to go to shepherd;" on which the dog would set off, and regularly visit every pasture, to see if there were any sheep overcast, a circumstance that, from their long wool and broad backs, frequently happens in hot weather.

The dog would, in his round, on some days, have perhaps forty sheep or upwards to help up, which he accomplished by putting his nose under the head, and raising the fore parts, until the sheep could rise.

In the county of Huntingdon, a very good method is practiced, of putting two posts at a proper distance one from the other, with a rail across, the height of a sheep, so that he may at pleasure rub his back; which is a great means of preventing sheep being over-cast, as it arises from an itching on the back, and their attempting to roll, to rub the part. When sheep get overcast, it sometimes occasions almost immediate death; and where there are many crows and ravens, they will peck the eyes of the sheep out: but I have known a sheep lie over-cast forty-eight hours, without injury.

I saw another striking instance of sagacity in the sheep-dog. A man had about sixty sheep bringing through Doncaster, he walking before them, and they regularly followed him. Seeing this, the people thought the man dealt in magic; but he had a dog, which the sheep knew was behind: the dog was not observed, as he went by the side of the walls, along the flag pavement, among the people; and as the sheep proceeded slowly, he crept into the passages and entries, and was not seen to notice either sheep or shepherd. I could mention many similar circumstances, showing the great use of these dogs, when well broke and properly managed.

Some men have an utter objection to the shepherd's dog: my father had. He contended that those dogs chased the sheep unnecessarily about, and heated them, thereby causing them to take the scab. From his reasoning I imbibed the same prejudice; but when I was in Ireland, where the pastures were large, and the sheep wild, I began to see they would be useful. When I returned to England, I bought a large Lincolnshire dog, and two whelps of the rough Dorset kind; after these dogs had been made use of for a short time, instead of the sheep being wilder, they became perfectly submissive to the dogs: unless the dogs were there, they would not come near the fold; but the instant the dogs appeared, they regularly walked in with all the composure imaginable. We had 1500 sheep during the summer; and one shepherd, attended by the large dog, managed them with seemingly little to do: in the time of harvest he worked the greatest part of the day; and while moving the turnip fold, the dog kept the sheep back, so that the shepherd could shift the hurdles alone.—Now this man would not have been able to shepherd our flock without the assistance of one or two boys, and then not with half the ease or so well: I am, therefore, clearly of opinion, that, on a large farm, where the pastures are spacious, a good dog is at least equal to one man.

The profit arising to the shepherd from these dogs is also great. The dog is generally shorn at the time of sheep shearing, and of the hair a hat is commonly made: and the breed is now so sought after, that the whelps are frequently sold for a guinea, or upwards, each.

[Gen. Lafayette has kindly proffered to the Editor of the American Farmer, a pair of the best shepherd's dogs to be had in France.]

HORTICULTURE.

ON THE CULTURE OF GRAPES.

[In copying the following extracts from "*A ride of eight hundred miles in France, in the autumn of* 1823, *by James Paul Cobbett*," son of the celebrated Wm. Cobbett; we act under the persuasion that, from the progress making in the culture of the vine in this country, and the great deficiency of knowledge as to the practical details of the whole subject; such articles as the following will be acceptable, as well to the general reader, as, yet more especially, to those who are appropriating a portion of their time and labour to this interesting object. All such articles as these, should be put by farmers into the hands of their children, when not otherwise engaged. They will serve, at least, to give them a general acquaintance with matters that are often, now, brought up as topicks of conversation, in good society. As to the merits of the subject itself, we mean the extension of the culture of the grape, and the use of it as a table fruit, and of its generous juice as a table beverage, it cannot be too highly recommended. We hold it to be an imperative duty with every good citizen, who would promote the happiness of his country, and the dignity of his species, to lend his hand to every project which may be, in the smallest degree, calculated to banish the degrading and pernicious use of ardent spirits: nay more, we conceive it to be as dishonorable to the character, as it is destructive of the morals and happiness of the nation, that a *heavy tax* is not at once laid upon ardent spirits, until every one, bearing the image of a man, should have to pay at least twenty-five cents for the quantity required to make himself a *beast*.]

"I see that there is very little variety in the mode of cultivating the vine in France, as far as I have gone through the country. In all the vineyards that I have seen, the vines are planted in rows. The rows are from three to four feet apart, and the vines in the row from two to three feet from each other. The vines seldom get up to above four or five feet high. They are cut down, in the month of February, or thereabouts, very close. There is a little of the last year's wood left, but not many inches of it, to give new wood for the next season. When they begin to shoot in the spring, there are stakes, of either round or split coppice wood, which are about four feet long and an inch and an half in diameter; and one of these stakes is stuck into the ground near the stem of each vine. The stakes are intended to give a hold to the tendrils, by the means of which the vines climb up, and thus keep themselves clear from the ground.

"The neighbourhood of Tours, is a great place for vines, and for making fine wines. The vintage of the black grape is not quite finished here, and that of the white grapes is not begun. In this part of France, they let the white grapes hang as long as possible, before they gather them; because they say it makes the wine stronger and of better flavour.—The snow is, they tell me, sometimes upon the ground, before the grapes are gathered.

"I saw a great many acres of vineyard to-day.—The vines look beautiful at this time, (7th November,) with all their leaves off and loads of grapes hanging upon them. The vines, which are planted in cuttings or slips, (just as gooseberries and currants are) of the last year's wood, begin to bear when about four or five years old. An acre of vineyard of the best sort of vines, in full bearing, is worth, at Tours, about 3,000 francs (or $600.)

"This year. they say, the vines will yield from 10 to 12 barrels of wine to the acre, each barrel holding 80 English wine gallons. The barrel will bring from 50 to 60 francs, (or 10 to $12) at this place. But the wine of this year will not be of the best quality, on account of the grapes not having *ripened quickly*, which they should do to make very good wine.—Some of the vines are very old; some of them forty, some fifty years old. The land round Tours is hilly; uncommonly good strong land, and stony, which is just the character to suit the vine. There is much rock in the hills here, and the wine makers have caves hewed out of the rock under the brow of the hills, in which to deposit the wine, and to carry on the process of making it.

"Some of the vines in this part of the country are cultivated in the *espolier* fashion. This is not, however. generally the case, where there is any considerable quantity of vineyard together. The common way is to stick one stake, about 4 feet high, up to each vine. The stakes are pulled up at this season of the year when no longer wanted, and placed away in a stack, just as hop poles are in England. The stakes are, as I said before, made of coppice wood, hazel, ash and other kinds. They do not last above a couple of years, for if used longer, they become rotten, and are easily broken by the wind. I was, when at Chateauroux, informed, that, further to the south, the cultivators of the vine make use of stakes of the locust, which, they say, grow in coppices, and last a great number of years. The locust, in France, is generally called *robinia*.

"There is a kind of grape, which I saw on some vines here, made use of to give a colour to the red wine: when this grape is squeezed, the juice is of a fine dark colour, a mixture of purple and red. It is made use of in giving a colour to all red wine, which could not have the fine colour that we see in it, but for the use of this sort of grape. The vintage of the white grapes begins this year about this time.

"The bunches of grapes are cut from the vines by means of a pair of scissors; they are then put into large baskets, which the gatherers carry to one side of the vineyard, and then the grapes are tipped into tubs placed ready for their reception. The tubs, when filled. are carried home in a cart or wagon, and the grapes are then (while in the tub,) pounded or bruised by a stout and pretty heavy piece of wood, which is made use of by hand. From the tubs, the grapes are thrown into a very large vat, as soon as they are sufficiently bruised. In this vat the pulp of the bruised grapes, and their juice altogether, remain for as much as a week or ten days, covered over as beer is when set to work, in order to undergo the *fermentation* that is necessary; during the *fermentation*, the pulp and juice in the vat rise up, just as bread does that is made of yeast. After rising up and frothing for some time, the head sinks, as that of beer does, and then the fermentation is supposed to be nearly at an end. As soon as this sinking takes place, the juice that flows in the vat is drawn off, leaving the pulp and the juice which that still retains, behind. The juice thus drawn off, is considered to make the best wine of the vintage; when this juice is drawn off, all that which remains in the vat is taken out and pressed in the wine press. The juice runs away from the press into a large tub sunk in the ground, from which it is emptied directly into the barrel. There is nothing at all *mixed* with the juice of the grape, and, from the time that it is first put into the barrel, it remains there until it is drawn off to bottle. The bunghole of the barrel, after receiving the juice, must be left open, covered only by a vine leaf, for about ten days, in order that all fermentation may subside before the barrel be made close for good. This is the whole process of the vintage, as far as relates to the *red wine*. That of the *white wine* is somewhat different. The white grapes must be pressed directly after they have been bruised, and instead of fermenting in the vat, pulp and juice all mixed together, like the red wine, the white wine must not be allowed to ferment till it has undergone all the pressing and separation of the pulp from the juice. It must be bruised, pressed and put to ferment in the barrel, without there being any lapse of time between these different stages of the process. The reason for this is, that if the white wine were to be allowed to ferment like the red, when its juice is mixed along with the pulp of the grapes, and their stalks, the pulp and the stalks would spoil the *colour* of the wine, and the wine would not, in fact, be *white wine* at all."

GRAPE SEEDS FROM MADEIRA.

Dear Sir,—I have imported from Madeira some of the most approved kinds of grape seed. The vines raised from the seed will last 90 to 100 years, while those from the slip will last only 10 to 12 years. I send you some of the seed to give your friends.

Very respectfully,
Your obedient serv't,
JAMES BOSLEY.

March 18th, 1825.

[As it is now time to plant them, it is recommended to call early, as Mr. Bosley has been very bountiful in the quantity he has sent.]

HORTICULTURAL SOCIETY OF LONDON.

The Editor of the American Farmer has been honoured with a diploma, bearing the distinguished name of Thomas Andrew Knight, conferring on him the privileges of a corresponding member of the great institution, whereof he is the President—great, because its funds are immense, and its researches and its beneficence coextensive with all parts of the civilized world.

It would be affectation, not to say ingratitude, were he not to acknowledge, that he accepts the notice of his election, as a flattering compliment to his humble labours; and he trusts that his correspondents, to whom he is indebted for all that is useful in his journal, will hold him justified in recording the following letters, connected with his appointment.

Horticultural Society—Regent-street,
London, April 28, 1824.

Dear Sir,—I was much gratified by the receipt of the letter you addressed me, by the hands of Mr. Douglass, and am pleased that I am thus enabled to enter into correspondence with you.

The council of the Society, having recommended you for election, as a corresponding member of the Society, I have the honour to send you (in a packet which accompanies this letter.) your Diploma, with a list of the Society published last year, and a copy of the chapter of our laws relating to corresponding members. The original laws being out of print, will be sent you when reprinted. You have also herewith the printed notice we usually send to our corresponding members, and two Reports for 1823 and 1824, on our new garden, with the laws for the regulation of the same.[*]

The copy of the American Farmer is a very useful addition to our library, and we shall be happy to receive from you the continuation of it. Our official acknowledgements for this work, and for the seeds supplied by Mr. Harrison, which you were so good as to send us by Mr. Douglas, are in the packet with the diploma. You will perceive from the nature of our institution, and from the general view the documents I have sent you will furnish, in what way you can render us service; and as reciprocity of kind offices is one of our ruling principles, I need not add how ready we shall be to communicate things you desire.

The reception and assistance given to Mr. Douglass, by every one to whom he addressed himself in the United States, is one of the most gratifying circumstances which could have occurred: you may be assured it has made a deep impression on all those to whom it is known, and that knowledge is very extended. Your box of wheat is a beautiful sample.[†] I shall not distribute it till the autumn; it arrived too late to be sown with any prospect of doing it justice, at the time, in cultivation—so that the most prudent course respecting it is, to keep it for another season. We received plants of the Arracacha last summer,[‡] but they have not done well with us—whether from difference of climate, or from ignorance of the proper mode of treatment, I am not able to state. We are anxious for a further supply, and if you can aid us in this, you will do us service.

I have the honor to be, with much respect,
Your very obedient servant,
JOS. SABINE, *Secretary.*

John S. Skinner, Esq.

Horticultural Society—Regent-street,
London, Jan. 10, 1825.

Dear Sir,—The separate packet enclosed herewith was prepared to be despatched to you, with others, in May; but circumstances, not within my control, prevented their despatch.

I trust you will not consider the omission as intentional, which is the most remote from the real cause. I trust to hear from you speedily in reply, and hope for a continuance of your valued correspondence.

I have added the list of the Society for the year 1824, in which you will observe a great extension of our members of all descriptions. You will also receive our official thanks for the seeds you were so good to send us by Dr. McCulloch, from whom I had the pleasure of receiving your letter of the 29th of May last.

The additional volume, and preface of another volume of your interesting work, were duly received, and presented to the Society, as you will perceive by the enclosed acknowledgement.

I have the honor to be, dear sir,
Your very obedient servant,
JOS. SABINE, *Secretary.*

John S. Skinner, Esq.

RURAL ECONOMY.

ON THE PRACTICABILITY OF OBTAINING WATER, BY BORING.

TO THE EDITOR OF THE AMERICAN FARMER.

Since my return, after an absence of a month from my farm, I have read the communication from Mr. Tyson and Mr. Mansfield, on the subject of boring for water. As far as their explanation goes, they are correct. excepting in the latter clause of each paper. Mr. M. says, that "as there are few places where the circumstances necessary to the production of springs do exist, there are still fewer where they exist and cannot find an outlet, and that it is only in such places where these outlets or springs are seen, that any advantage from boring can be obtained." And where, sir, do such places *not* exist? Every little brook and rivulet—the springs that form rivers, wells that are formed by art, all indicate to the borer where he may obtain water; and even if a region could be discovered where there were no springs within a thousand miles, still there, if the borer could go down to the depth of a thousand or fifteen hundred feet, he would get water. In New York there are many spontaneous springs; some that were obtained by digging, and some that found outlets for themselves. At present the Manhattan Company are boring for water. Unfortunately for the theory, they have chosen a spot where a thick primitive rock lies unbroken; of course, until they have bored through that rock, or until they shall encounter several fissures in that rock, they cannot expect water. I hope that they will not be deterred from continuing the experiment. I will put them in a way of getting a spontaneous flow of water at a trifling expense, and their machinery, can for a time, be removed from the present spot to another where a new attempt can be made. At the corner of Maiden lane and William-street is a corporation pump; the well was dug by them about twenty years ago. While the well-digger was at work, a friend of mine, luckily, was looking at him; the ladder by which the man descended lay near the well at the top—"put down the ladder," said the man below, "I have just struck a spring." The man was but just able to reach the surface, when the water, which came up with a roaring sound, not only filled the well, which was 14 feet deep, but actually ran over into the street. In a few days the water, finding porous earth in the well, soaked off and stood a few feet from the surface—this pump has never been pumped dry, although there have been fires in the vicinity of six hour's continuance. The water was delicious and continued so until the well was saturated with the foul matter that it absorbed from the surrounding earth—the soakings of the street. If the Manhattan Company could exclude the drip-water from that well, and bore down a few feet, four would be sufficient, they could bring to the surface, or many feet above the surface, an inexhaustible flow of water. One hundred dollars would be quite sufficient for the experiment.

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[*] A plan of the garden, also, has been received.

[†] Sent by Tench Tilghman, Esq. of Talbot county, Maryland, at the Editor's instance—and probably the most perfect and beautiful sample of white wheat ever seen in England.

[‡] A very nutritious and valuable plant from the Oronoco, resembling the sweet potato.

Now the spring that supplied this well must have come from an immense depth, for it was pure and soft; whereas two other wells that were begun at the same time in Broadway, were dug to the depth of 30 feet and more, and the water was brackish immediately. Although all those who are conversant in hydrostatics adopt the theory of Dr. Halley respecting the *re*production of water and its descent by the gravitating principle, yet no one has, thus far, accounted for those *spontaneous* springs that are often seen at the side, near the summit of high mountains, and sometimes on the very top of mountains. There are numerous instances where these springs have existed for ages, undiminished. Now, springs are easily distinguished from reservoirs; the latter are often seen both on plains and on the tops of very high mountains; when on plains, they are produced by heavy rains, and are dissipated by evaporation—when on mountains, they are constant, because condensation is continually going on. The water is only simple rain water, and is soft and pure. Springs, on the contrary, assume a different character. To give one instance—on the side of Scholey's mountain, about 30 feet from the top, issues a spring that has been there for ages. It is a chalybeate. I was there in the last summer of drought. Not a reservoir, not a pond, was to be seen any where on the top—the two previous summers had been of uncommon drought—so that had this spring originated from the leakage of reservoirs or ponds at the top, it would have been exhausted each summer. This water, and other water that issues from this mountain, has formed a lake about five miles distance.

Assuming the hypothesis that "mountains have been upheaved by some internal commotion," there must be innumerable fissures and cavities throughout. Through these fissures, water gravitates, and through these same fissures elastic gasses escape upwards. Water that is gravitating in a horizontal direction, under the base of a mountain, may intersect a stream of gas; if the gas be more than equal to the weight of water, it will force the water up through the fissures, and either find an outlet at the sides or at the top. This water will be impregnated with the mineral qualities of the gas which sometimes is the result of acid, and sometimes of alkaline combinations. Sometimes these streams of gas and water may be present in the midst of plains 500 feet below the surface. If we could be assured of it, we might bore to that depth, and the water would rise; more than probable, however, it would be strongly impregnated with salt, for I believe that salt may be obtained any where, at irregular depths.

I have reduced the theory of boring to two points—that we can obtain water by encountering *superficial* springs, and again by *central* springs. Superficial springs are those waters that we obtain by the simple laws of gravitation—water is formed on the tops of mountains; it percolates through fissures and porosities; descends below the base of the mountain, runs horizontally, and is intersected by a well digger, or borer—this water has no pulse—no ebb nor flow—it forms *rivers* and *lakes*. Central springs are those waters that have gravitated, unobstructed, to the point whence gravitation ceases. Surely there is such a point, and as water has been gravitating ever since the creation, some must have reached this point. It will ever be impossible to ascertain what the central power is, that propels from it all such matter as is presented. There are many things that gravitate to this point, both with water, and apart from it—caloric, atmospherical gasses, &c. The central power, whatever it may be, is of such force as to throw from it all extraneous matter. The *agent*, that this power employs is, undoubtedly, *gas*—not the common gas that is extricated from beds of minerals, but *pure elastic oxygen gas*—as this gas proceeds upwards to the surface, it is sometimes united with other gasses, such as alkaline or acid, or other mephitic gasses. If it escape upwards through the ocean, the proportion of other gasses is so small as that the atmosphere is fitter for respiration than on land. Water, therefore, that is propelled to the surface by the central power, I call *central* springs; they have a pulse, an ebb and flow—they form the reciprocating springs—and form, too, seas and oceans.—As this subject is investigated by the learned, a new theory of the tides will be elicited—for I am convinced that the present theory of the tides is not the correct one. The similarity of the motions of the moon, has led to its adoption. As there is a given impetus to the earth, enabling it to revolve round its own centre every 24 hours—there may be an internal power, of sufficient strength to force from itself, all transmitted matter, at stated intervals; say every 12 hours, as with the tides. The more direct the communication is between the outlet, and the agent of the central power, the more regular will be the ebb and flow. If we pursue this idea, more satisfactory results may be obtained than with the present system. Now, we are obliged to take *much* for granted, and overlook the singular and glaring fact, that lakes, as large as some seas, are unaffected by the supposed influence of the moon, although the volume of water could be as easily elevated, or depressed, as the ocean. There is no accounting, to a certainty, for the ebb and flow. It may reciprocate on a large scale, as some springs are supposed to reciprocate. But this may furnish matter for another paper. All that I want to advance at present, is, that we may get a permanent supply of water, at whatever place we may choose to bore for it;—and that the water thus obtained, is entirely independent of gravitation—and that by tubing down to a certain depth, all soakings of foul matter will be shut out. Mr. Tyson observes, that it is the practice to tube down to the very bottom of bored wells. This only applies to those wells that have been bored for *salt*. It is necessary to exclude the fresh water; and as salt water may not be obtained until a considerable depth has been bored, say 500 feet, the well must be tubed down to that depth. It is a different affair when we bore merely for fresh water. From 60 to 80 feet is quite sufficient in any case. Water, according to Mr. Tyson, in its ascent through the bored well, may encounter fissures, and run off. In no instance has it occurred in my experience. These fissures are either traversed by water or gas—both rush to the vacuum above, and the water below is not depressed nor carried off laterally, but rises up with the upper stratum. To tube below these springs we must exclude them—and after going down 300 feet with tubes, the springs or veins that we may find, may not possess sufficient force to make them rise above the surface;—from 60 to 80 feet is tube enough.

Yours, respectfully, C.

SPORTING OLIO.

SPORTING AND OTHER ANECDOTES,

AND MISCELLANEOUS ITEMS,

Taken chiefly from late English papers received at the office of the American Farmer.

Difference between the English and American Hare.—The Monkleigh harriers met at Littleham, Devon, on Monday last, and started a hare on Northam Ridge; she ran through Littleham, crossed the river at Landcross; from thence to Monkleigh, over the river Torridge three times at Wear Gifford, pursuing her way to Bideford, Hunshaw, Alverdiscott, and Westleigh, where she was killed, having run through ten parishes from *ten in the morning to four in the afternoon*, affording equal fatigue and pleasure to the sportsmen.

Sagacity of a Fox.—A few days ago, two foxes were discovered in the gardens at Houston, Cheshire, the seat of Sir T. Stanley. One of them afforded much sport, and was killed; the other was permitted to escape. Sir Thomas's hounds drove a fine dog-fox from cover, and had a glorious run with him to Brimstage—in the whole a distance of about 20 miles. Being closely pursued, Reynard made for a farm-house there, and leaped on a wall about six feet high, and from thence on an adjoining cart-house three feet higher, close to the dwelling-house, which, on that side is nearly covered with ivy. This afforded too fine a shelter to be lost, and up it did the cunning animal creep, till he had gained the roof, and was screened from observation! The hounds soon came up, and had the scent fresh to the wall, where they were obliged to "stop at a gage," and the pursuit terminated, greatly to the disappointment of a large field. In the course of the night, the farmer was annoyed by the barking of his yard-dog, which, the next morning, was observed making several attempts to get on the cart-house. This afforded a clue to the farmer that some strange visitor was near, and he accordingly got a ladder, and mounted the roof, where snugly couchant in a spout, closely shaded by the ivy, was sly Reynard! The animal immediately made a fresh start, descended to the cart-house and the ground, and once more got into the fields without injury.

THE FARMER.

Baltimore, Friday, March 25, 1825.

According to the terms of this paper, the subscription money is now due for the 7th volume, and we trust that no friend of the establishment will wait to be further called on. If those who have, by particular indulgence, been permitted to fall in arrears, do not *mean* to pay, we should take it as a kindness that they would say so, that we may know what we have to depend on.

The Board of Trustees of the Maryland Agricultural Society, had a full and very satisfactory meeting at Eutaw, the residence of B. W. Hall, Esq. There was much discussion and interchange of sentiment on the affairs of the Society and the agricultural interests of the state; and various resolutions were passed, whereof we have only room at present, to mention—one instructing J. S. Skinner, the Corresponding Secretary, to invite, in the name of the Society, the attendance of the President of the United States and the Heads of the Departments at their next Cattle Show and Exhibition of Household Manufactures, to be held on the first and second days of June next—One appointing James Carroll, D. Williamson, and J. S. Skinner to prepare and circulate handbills in reference to the next Exhibition—Another, appointing James Cox, B. W. Hall and J. S. Skinner to procure the premium plate—And another, which ought perhaps to have preceded the foregoing, as the *means* should precede the *end*, in the following words, viz.

Resolved, That the President, each Trustee, the Treasurer, the Secretary, and the Corresponding Secretary, be, and they are hereby requested, to pay in at least $30 previous to, or at the next meeting of the Board.

Other proceedings were had, of which due notice will be taken.

Tobacco.—We can make no quotations of tobacco—there have not been a dozen hogsheads inspected, and no sales.

Veritas, in reply to Agricola, can go in the same volume only by being published at the bottom of the Index to that volume, where we shall place it.

SEEDS, GRAINS, FRUITS, &c.

Deposited with the Editor of the American Farmer for gratuitous distribution to his Subscribers.

Of those things we propose to keep a more regular register than we have hitherto done;—but we regret very sensibly the impossibility of making the distribution as widely as we could wish. We have attempted to do it heretofore, but experience has taught us, that it would be more than sufficient employment for an expert clerk to make up the packets, were we to attempt to send parcels to one half of those to whom every consideration invites us to show such civilities, and by whom we know they would be properly received, and turned to the best account. The most that we can promise, therefore, is to place such things in the office of the American Farmer, where any subscriber may call, or if a non-resident, can get his correspondent here to call and take a portion. All that is asked is, that his name be left, together with his residence, as a means of future information, should it be desirable to make inquiries.

These must be standing regulations that we wish to be generally understood. For the present we have to take note of

Winter Grixon Apples—A rare and valuable table fruit, supposed to be chiefly confined to Somerset county, Maryland; these from J. B. Morris, Esq. a Trustee of the Maryland Agricultural Society, to whom application may be made for cuttings.

Grape Seed—Two gallons imported by James Bosley, Esq. especially for the use of American Vignerons, These may be had at the office of the American Farmer. See his letter in this paper.

Barley—*Of the most beautiful appearance*, just received by the Editor from Com. Hull, in the Pacific—about one peck; apply at the office of the American Farmer, without loss of time. Some had better be reserved for fall sowing.

Wheat—*Of large, flinty, transparent grain*, from Mr. Shaler, at Algiers. This belongs, in fact, to Mr. Auditor Pleasanton, of Washington, and came to the Editor by mistake—Mr. P. authorises its distribution—but it is not known whether it be spring or fall wheat.

Cuttings—From Col. T. Emory, of the "Scrivener's Red" Apple, believed to have originated in Queen Ann's county. As a winter table apple, it is only inferior to the *green* pippin, and for eating, cider and great productiveness, it is excelled by none; besides being almost a constant bearer. A fuller account of it will be given hereafter. Subscribers to the Farmer will please call for the cuttings, of which there are three dozen.

Cotton Seed.—The Editor can supply seed of the Common Cotton, and of the Nankin Cotton, which grows of lasting yellow colour, to any gentleman who may wish to make small experiments in Maryland.

In this way, things of this sort will be hereafter noticed; and we repeat, that subscribers must come, or send, and take away, leaving only their names and residence, with the promise of giving fair trial and noting the result

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IN PRESS, and will be published in a few days, by JOSEPH ROBINSON, *corner of Market and Belvidere sts. Baltimore*, (price, bound $1—in boards, 87½ cts.)

A PRACTICAL TREATISE

On the Diseases of the Foot of the Horse,

Containing a correct description of their Nature, Causes, and Methods of Prevention, with suggestions of improved plans of treatment, founded on physiological principles. Also, Rules of Shoeing, by which the ordinary evils attending this process may be in some measure prevented. Dedicated, by permission, to General Charles Ridgely, of Hampton—by Richard Hayward Budd, Veterinary Surgeon. Second edition, revised and improved by the author.

This work has been submitted to several gentlemen, who have been many years familiar with the treatment of horses, and they are of opinion it is a valuable practical work, which should be in the hands of every one who may own a horse, and regard the comfort and health of this useful animal. The work was published in England a few years ago by the author, who now resides in Baltimore. There is a review of it, of some length, in the Sporting Magazine for April, 1816, and continued in the number for May, in which the author and the work are both noticed with great respect. The following short extracts from the review, are selected in order to show how Mr. Budd's labour and science have been appreciated.

"Mr. Budd, we look upon, *from the testimony of his book*, to stand in the superior rank of Veterinary Surgeons, and he seems to be in need of nothing but the opportunities, to evince his claim to the highest distinction of merit and utility in the professional line which he has chosen."

"We think this author's choice of subjects judicious, as confined to *particular accidental and difficult diseases of the horse*, on which he gives the results of his own experience." "Tracts like these, of the *practical experience* of the author, are far more valuable at the present time, and ought to be in far greater request, than general veterinary treatises, with which the British public has been long since furnished to satiety." "We conclude with strongly recommending this book, not only on the score of its practical and professional ability, but for those traits of humanity and feeling, which are occasionally visible."

CONTENTS OF THIS NUMBER.

On the culture and preparation of Cotton for market—The value of the Ox over the Horse—Improved Short Horn and Hereford Cattle, great match between them—On the sagacity and usefulness of Spanish Shepherd's Dogs—On the culture of Grapes—Grape Seed from Madeira—Horticultural Society of London—On the practicability of obtaining water by boring—Sporting Anecdotes—Notices, Editorial, &c. Advertisement.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9		
BACON, and Hams, . .	lb.	6	8		
COFFEE, W.I. Green, .	—	17		20	
do. Common,	—	15	16	18	
COTTON, Louisiana, &c.	—	22			
Georgia Upland, . . .	—	18	19		
Alabama, ...	—				
COTTON YARN, No. 8,	—	30			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	10	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32			
FISH, Herrings, Sus. new	bbl.				
Shad, trimmed, new,	—				
FLAXSEED, Rough, . .	bush	75	80		
Cleaned, ...	cask				
FLOUR, Superfine, city,	bbl.	4 62			
Fine, ...	—	4 25			
Susquehanna, superfi.	—	4 50	4 62		
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5			
GRAIN, Indian Corn, .	bush	35			
Wheat, White, new, .	—	90	1 10		
do. Red, do. .	—	85	90		
Rye, ...	—	37			
Barley, ...	—	50			
Clover Seed, ...	—	3	3 50		
Ruta Baga Seed, . . .	—				
Oats, ...	—	20	22		
Peas, Black Eyed, . .	—				
Beans, White, ...	—	90	1 12		
HOGS' LARD, ...	lb.	9			
LIME, ...	bush	23	25		
LEATHER, Soal, best,	lb.	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	23	30	37	
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	5½			
NAVAL STORES, Tar,	bbl.	1 75			
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2	2 50		
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50			
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	33			
RICE, fresh, ...	c.lb.	3			
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	20	23		
PEACH BRANDY, 4th pr	—	65	82		
APPLE BRANDY, 1st pr	--	20	22		
SUGARS, Havana White,	c.lb.	13 00	13 50		
do. Brown, . .	—	8 50	9		
Louisiana, ...	—	7 25	8 75		
Loaf, ...	lb.	17	18		
Lump, ...	—	15	16		
SPICES, Cloves, ...	—	85			
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	2	2 25		
Nutmegs, ...	—	1 40	1 50		
Pepper, ...	—	19			
SALT, St. Ubes, ...	bush	44			
Turk's Island, ...	—	49			
Ground Alum, ...	—	50			
SHOT, all sizes, ...	cwt.	9			
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. L. M. . .	—	1 75	2		
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Sherry, ...	—	1 10	1 15	1 50	1 75
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	35	40		
do. crossed, . .	—	28	30		
Common, Country, . .	—	20	30		

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AGRICULTURE.

STONE LIME,

On the use of, as a manure—and on the construction of kilns for burning it.

Baltimore county, 26th Feb. 1825.

TO THE EDITOR.

In answer to your inquiries, respecting the construction of Lime Kilns, and the use of Lime as a manure, I communicate the following results of my own experience.

A kiln in which a thousand bushels may be burned, I think the proper size. The mason's charge for building such a one, or of any given dimensions, four dollars for every hundred bushels the kiln, on trial, will turn out. The hearth is an oval, the longer diameter 7 feet 6 inches, and the shorter 5 feet 6 inches. About two feet above the hearth, the kiln is enlarged nine inches to form the bench, which serves to support a vault, called the arch, shaped like the upper part of an oven, constructed of the larger pieces of lime stone that are to be burned, and to receive the fuel beneath, and support the stone thrown in from the top. From the bench upward, the kiln is gradually expanded, preserving the shape of the inside of an egg shell, to its greatest dimension, sixteen feet across, and fourteen feet above the bench; thence it is contracted so as to be fourteen feet diameter at the top, the whole depth being eighteen feet. An excavation large enough to contain the whole structure except the breast and wing walls, is made in the side of a hill, for the convenience of approaching the top with carts to tilt in the stone on the arch. Two men can attend the burning, which takes two nights and three days, of unremitting labour. Four perches of stone, 24 feet 9 inches solid measure, yield one hundred bushels of lime, and two cords of half-seasoned wood will burn that quantity. The drawings that accompany this communication, will assist to explain this description of a lime kiln.

My manner of spreading lime is, to mark on the ploughed ground so many squares as I intend to put bushels to the acre, and to place at every point where the lines intersect, a bushel of unslacked lime. After a few days, or after the first rain, the lime slakes and pulverizes, and is then easily spread by shovels with sufficient equality. The lime is measured from the kiln into carts drawn by two horses, that contain 15 bushels each, and the drivers, with each a hoe, draw out 15 heaps, as nearly equal as they can, at the proper places. This I have found to be sufficiently accurate.

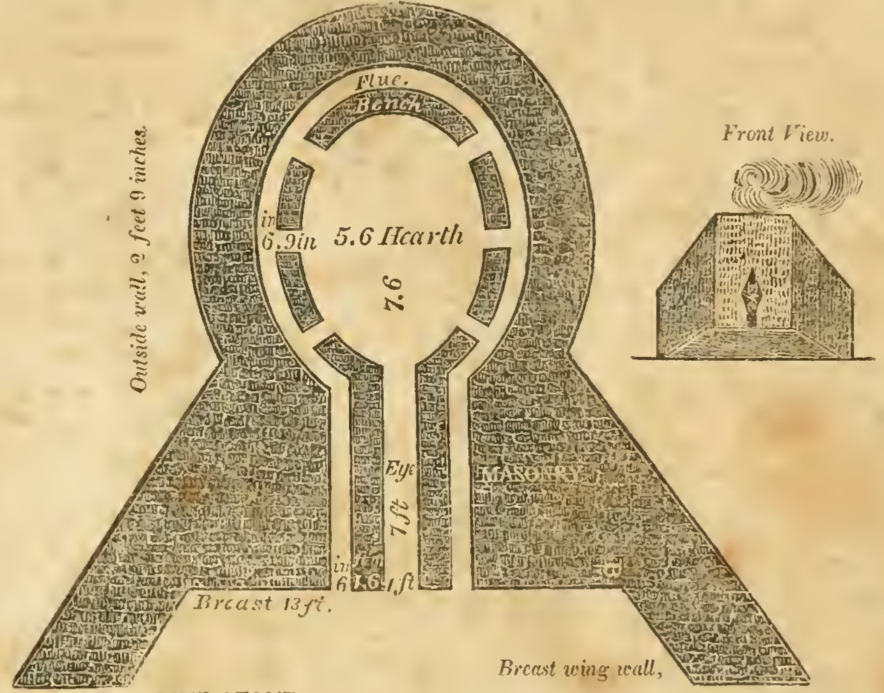
My first trial of lime for manure, was made in the year 1819, with 3,842 bushels, applied in quantities varying from 50 to 130 bushels to the acre; the land that received the greatest amount, is the most improved. One field, very much exhausted at that time, and not originally of good quality, I believe to have improved in its fertility three fold at least, on one part of it, and from another part of it I have sold two tons of timothy hay per acre, from the last mowing. In most cases I have spread lime on ploughed ground in the spring or winter, for Indian corn; its good effects have been perceptible on the corn crop, but more manifest in the improvement of the grain and grass succeeding the corn.

The use of lime for improving land is increasing very much in those parts of the county, sufficiently near lime stone to justify the expense. The price at the kilns in my neighbourhood, is 15 cents a bushel.

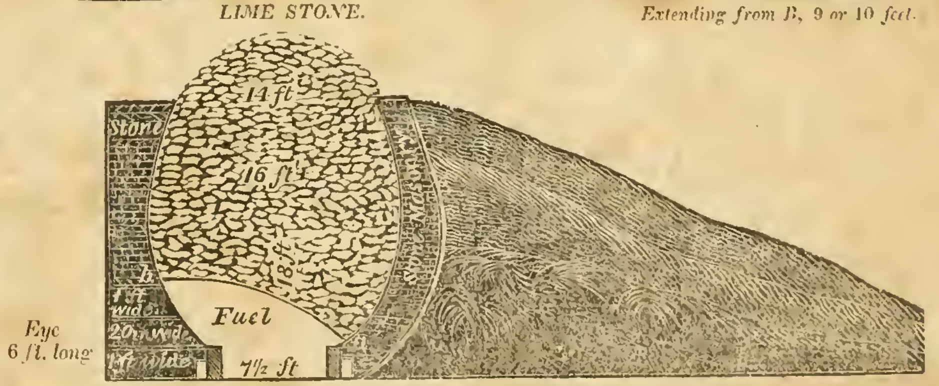
I have examined the relation of the Perpetual Kiln at use at Mauch Chunk, on the Lehigh, that you enclosed to me, and think our mode of burning more economical, even at the low price refuse Lehigh coal, can be purchased, *where it is much used.* To draw 60 bushels of lime, and replenish the kiln with coal and stone every morning, requires more constant attention than can be conveniently given, when the labour is in great part performed by the farm hands, who can be spared only at certain times from other work. The statement of a Pennsylvania Farmer, (in the American Farmer, vol. 6, p. 308,) who burnt 700 bushels of lime with two tons of Lehigh coal, in a kiln constructed as those we now use, is much more encouraging; inasmuch as, reckoning two tons to be 58 bushels, he produced ten bushels of lime for one of coal; whereas the Mauch Chunk Perpetual Kiln takes from 8 to 12, an average of 10 bushels, to produce 60—or only six of lime for one of coal.

I believe I have answered all your inquiries; but if any other should be suggested, it will give me great pleasure to give any information on this subject that I have, or can collect from sources worthy of credit—and am, with great respect and esteem.

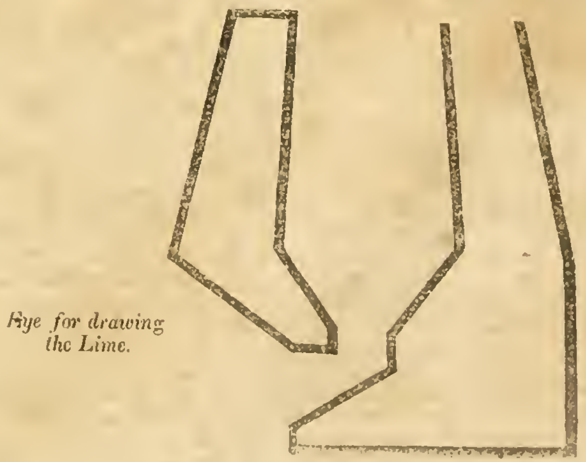
Yours, JOHN PATTERSON.



Ground Plan of a Lime-Kiln—Scale 8 inches to 1-3d of an inch.



Section of a Lime-Kiln, from the eye to the back—a. b. is the arch made of lime stone, to prevent the stone from falling, and to put the fuel under.



Perpetual Lime-Kiln, used at Mauch Chunk—on a scale one-eighth inch to the foot.

The last cut is a section of the lime-kiln which has been in use for about two years at Mauch Chunk, on the Lehigh, the interior of which is circular. From this kiln, 60 bushels of lime was daily drawn, and required 8 to 12 bushels of the fine screenings of Lehigh coal to burn that quantity; or say one bushel of the screenings to burn six bushels of lime stone. The kiln is first lighted up with wood, by filling it one third full of oak wood, on which throw a course of lime stone, say one foot thick, (the stone is broken up about the size of a man's head), on which put about 4 bushels of the coal; then alternate with stone and coal in the above proportions; until the kiln is heated it will make core, which is separated and thrown again into the kiln. The lime is drawn morning and evening. The rule is to draw the lime until it begins to look red with heat. And as soon as the drawing is made, fill it up again from the top with alternate layers of stone and coal, say six barrow loads of lime stone and one of fine coal, spread equally over the stone; care must be taken in putting on the last or top course of coal, to cover it all over the top so as to prevent the draft of fire from breaking through in one part more than the other. If a larger quantity of lime than 60 bushels per day be wanted, there doubtless will be no difficulty arising by enlarging the kiln, to produce any required quantity, up to 200 bushels per day. The upper part of the kiln should not overhang more than six inches to 10 feet in height.

Note.—As the coal for burning lime is the fine, or refuse coal, it can, in populous neighborhoods where much coal is used, be bought at a reduced price. It can now be had in Philadelphia at 12 1-2 cents per bushel.

ON THE IMPORTANCE OF INDUSTRY AND ECONOMY, AND ON THE MANAGEMENT OF LAND,

With a view to net profit and permanent improvement, by Earl Stimson, Esq. of Galway, Saratoga county, New York.

[It will be sufficient to insure attention to what follows, that it is known to come from the pen, and to be bottomed on the experience of Earl Stimson, Esq., whose success, as a practical farmer, has been already made known to the readers of this journal. There may be some repetition in the facts now given, but they are facts of such value as bear to be repeated; and moreover there are in this address interesting views not before presented. We hold it however to be our duty to warn the reader, from personal observation of Mr. Stimson's soil and climate, that in our so much more arid region of country, the same processes would not lead to the same profitable results. Still, by the pursuit of his plans, and the observance of his maxims, there is enough to stimulate exertion and to justify the confident expectation of ample reward. The extract is from an address delivered to the Saratoga County Agricultural Society, in Oct. 1823.]

I TRUST that I shall be heard with indulgence, whilst I direct your attention for a few moments to some general remarks on industry, and economy, accompanied with some observations on practical husbandry.

Industry and economy combined, form the true philosopher's stone, which turns all into gold. Without these essential qualifications, no one can be a respectable, or an useful member of society. They are, therefore, among those principles which should be instilled into the child from its earliest infancy. They most generally exist together, and are both so indispensably necessary to success in any pursuit of life, that where one is wanting the other, for all practical purposes, may as well be absent. For without industry, economy will be of no avail. And without economy, the fruits of industry are soon wasted. Man being formed for action, and duties always devolving upon him, industry and economy cannot be dispensed with, in any situation in which he can be placed. It is the want of these, that prevents the success of so many in the various mechanical branches, as well as in the learned professions—and it is the primary cause, which calls in the aid of the insolvent law to close up the concerns of so many in the mercantile world.

The indolent person soon loses the confidence, and of course, the patronage of his employers, and poverty and disgrace are the final and inevitable result. But in no one, are the unhappy effects which result from the want of these, more apparent than in the cultivator of the soil. The indolent farmer exhibits his own disgrace to every passing traveller; and brings forcibly to the mind even of a stranger, the words of the wise man—"I went by the field of the slothful, and by the vineyard of the man void of understanding, and lo it was all grown over with thorns, and nettles had covered the face thereof, and the stone wall thereof was broken down." How true is the picture which Solomon here gives of what daily falls under our own observation. How often do we see a farm susceptible of a high state of cultivation, and which might, with any thing of industry and economy, be a source of wealth to its possessor—how often do we see it grown over with bushes, briars, thistles, and every hurtful weed—the fields badly arranged, the fences out of repair, the land half tilled, the barn doors broken from their hinges, and the windows of the house filled with hats, presenting any idea but that of comfort.

On a nearer examination, the picture is still darkened. Look at his stock, his out-houses, his implements of husbandry;—every think is poor and out of its place. Enter his dwelling—*his home*, that sacred place, in which are to be found the only fruits of EDEN which have survived the fall—Is domestic peace and happiness ever found within, where neglect and ruin are without? Does not every thing wear the same aspect—and is there not inscribed on every thing on which the eye can rest, indolence and waste?

Reverse the picture, and what can be presented more agreeable, what can be accompanied with more pleasing ideas. Look at the farm of the man who is diligent in his business, and prudent in his concerns—his own spirit is infused into every thing around him—every thing is in repair, every thing is in its place, every thing is in its season;—every thing evinces that the master's eye has seen and directed all his concerns—and that he hath remembered and practised the adage—

> "He that by the plough would thrive,
> Himself must either hold or drive."

On a nearer examination, we find his fields well arranged and productive, his crops clean, and of the best quality, and secured in season under cover, instead of being exposed to the weather in stacks, as is too frequently the case, to the great loss of the farmer, both in the crop itself, and in the manure of which it might be productive—we find his cattle well fed—in good condition—and *often* better sheltered than the *family* of the slothful. Enter his dwelling, it is the habitation of plenty—the storehouse of the dairy and the loom—and his fire-side, that calm and domestic one, where the farmer in the bosom of his family, finds not only rest from his toil, but the richest reward of his labour.

Since we are assembled for the purpose of mutually receiving and communicating instruction, and stimulating each other in that pursuit, which was the first, and is still the most honourable employment of man—it will be expected that something will be said more particularly on the cultivation of the soil. Agriculture embraces in its widest sense too many subjects to admit of a description in detail, within the limits of a single discourse. Division and fencing of a farm, the proper mode of tillage—draining and watering of land—the rotation of crops—kitchen gardening, that important, though much neglected subject—the planting and cultivating of fruit trees—different kinds of manures and their application—the raising and fatting cattle—the form and construction of farming utensils—the most proper mode of building, both as it respects the form and materials—and the different kinds of domestic manufactures, would furnish matter for an useful discourse—but without descending to any particular discussion on any one of these subjects, suffice it to say, that a knowledge of them all will be sought by the practical farmer. But permit me in compliance with the request of several gentlemen, briefly to subjoin a statement of what I have found to be the most successful and profitable mode of cultivating the farm which I have taken under my immediate care, and upon which I have tried a number of experiments.

The soil of this land is a brown loam, lying on a stratum of lime and sand stone, at the depth of from three to six feet, projecting out of the ground occasionally on the brink of ridges. The surface was covered with round hard stone, sufficient, when put into half wall with posts and rails, to enclose it in lots from five to ten acres. The original timber was principally beech and maple, mixed with bass wood, elm, and hemlock. The whole farm was interspersed with spots low and springy. When first cleared, the dry land was productive both in grain and grass.

It was occupied as four small farms, previous to its coming into my possession, and had been so often croped without seeding down to grass or being supplied with manure, as to become in a great measure unproductive, not yielding the occupants on an average more than twenty bushels of grain or one ton of hay per acre.

Little or no attention had been paid to the arrangement of the lots—the fences were in a decayed state, and the buildings much out of repair; and the whole was much covered with old logs, stumps, stones, hedges of briars, unprofitable bushes and weeds. For the first four or five years after part of this land came into my possession, I pursued the common way of farming, and half ploughed and harrowed my land over the stones, and around the logs and bushes—summer fallowed at the loss of one crop, and ploughed in what little manure I saved five or six inches deep. I laid out much labour and got small crops.

Tilling my land with hired hands, I found on posting my account, it was running me in debt, instead of being a source of profit. This induced me to try some other method, and after several experiments, having for their object the economy of labour, the procuring and application of manure, and the rotation of crops—the following has proved the most successful.

In the first place, I drew a plan on paper, arranging the land into square and convenient lots, containing from five to ten acres, having an eye to the convenience of water for each field, and to the transportation of its produce to the barn, where it was to be housed, but with no regard to the unevenness of the surface or the swales of springy land. This land cost about twenty-eight dollars per acre. I commenced fitting the lots, and continued year after year in succession. The management of one may be taken as a specimen of the whole.

I removed the rubbish at an expense of about $2 per acre. The loose stones were then removed, and with posts and rails placed into permanent fence, at an average expense of $6 per acre. This expense added to the first cost of the land, makes an average of $36 per acre, excepting repairs of buildings, when the land was fit for tillage. I then arranged my barnyards, a little dishing, where it was convenient, for making and preserving manure. I drew into them, in the fall, a quantity of turf and dirt from the knolls around my buildings and the adjacent roads, and yarded my stock upon it during the winter. This course I pursued for a few years, until my crops so increased as to furnish me with manure in a sufficient quantity to give each of my lots a slight coat once in five or six years. In the spring it was thrown into small piles in the yard. In the fall commenced ploughing, with a good and faithful ploughman, who turned over the sod about three inches in depth, and from eight to ten inches in width. The dry part was back furrowed into lands of twelve paces, and the wet into lands from five to six paces wide, leaving a deep dead furrow to answer the purpose of a drain. I spread over it from six to eight three horse loads of manure per acre, and on the driest and most barren I have added three or four loads of old leeched ashes—rolled it down with a roller five feet long and twenty inches in diameter. This was done to pulverise the lumps and settle the manure and land together.*

This I have done both in the spring and fall—the spring I have found the best time, but not so convenient for carting manure. About the tenth of May it was well dragged, or ploughed with a one horse plough; if ploughed, it was harrowed down, and it was wet and springy, it was cast into small ridges by throwing two furrows together at a distance of two and a half feet from the centre of the ridges, but without disturbing the sod; then cross-marked at the same distance. About the fifteenth or twentieth of May, it was planted with eight rowed yellow corn, twelve quarts to the acre, wet in a pickle made of six ounces of saltpetre, two quarts of boiling water, one gill of tar. This pickle was applied to the seed boiling hot, which immediately was rolled in plaster and planted. The head lands were planted with four rows of potatoes, for the convenience of turning the horse so as not to break down the corn.

After the corn was out of the ground six or eight inches, it was lightly ploughed both ways—one furrow in a row, dressed out with a hoe, and plastered on the hill, five pecks to the acre. After two or three weeks it was ploughed and hoed as before, without disturbing the sod, and suckered before hoeing, leaving three or four stalks in a hill. The potatoes were hoed at the same time with the corn—the first time, the tops were covered about an inch, and the hill left flat—the second time, the tops were spread apart with the hoe, and about the same quantity of dirt applied on the hills as before. The whole of this expense, including the manure and interest of the $36, did not exceed $19½ per acre.

In the fall, I gathered on an average from sixty to seventy bushels of corn per acre, fit for the crib; which, at that time, was worth fifty-six or sixty cents per bushel; and from four hundred and fifty to five hundred bushels of potatoes, worth about sixteen cents per bushel. After the corn was harvested, the hills were harrowed with a two horse drag. In the spring, I ploughed it just deep enough to turn up the old sod, which had become a fine vegetable mould for a spring crop; and after harrowing the furrows down, sowed it with barley, washed in strong brine and rolled in plaster, about two and a half bushels of seed per acre, harrowed it, and before cross harrowing, it was seeded with four pounds of the large red clover seed, and three quarts of timothy. After the barley was out of the ground one or two inches, it was sowed broad cast with plaster, five or six pecks per acre, and rolled down to pulverise the lumps and smooth the surface for mowing. The expense of this crop was not to exceed ten dollars per acre; an average produce, forty bushels per acre, worth sixty-two and a half cents per bushel. I took from this ground, the two succeeding years, from two and a half to three tons of hay per acre. In this way the land was cleansed, enriched, and prepared for a further rotation of crops.

The second rotation.—The sod was turned over the last of August or first of September, manured and rolled down, as in the first instance. About the 15th of September, I sowed it with red chaff bearded wheat, one and a half bushels per acre, and harrowed it in. The seed was prepared by washing it clean in a strong brine made with salt, and immediately rolled in lime, and I let it lie moist twenty-four hours, to prevent smut and insect. In the fore part of May, five or six pecks of plaster were sowed broad cast to the acre. The expense of this crop, including manure, was about $16 per acre—the produce from thirty-five to forty bushels per acre, worth one dollar and twenty-five cents per bushel.

Late in the fall, or early in the spring, I turned up the old sod—harrowed and planted it to corn. Tilled as before mentioned, except the barnyard manure—the expense about $14 per acre—had from eighty to a hundred bushels per acre, worth forty-four cents per bushel.

In the fall, or early in the spring, I harrowed down the hills, and in the spring prepared and sowed it with some spring crop suitable to stock down—sowed and rolled as before stated, produce from fifty to sixty bushels if barley—from twenty-five to thirty-five if spring wheat—and from seventy to eighty if oats—from five to six hundred pounds if flax, per acre; and afterwards, taken for two or three years, from three and a half to four tons of hay, or pasture in that proportion, per acre. Some seasons, instead of sowing wheat on the sod in the fall, I have turned it over in the spring, rolled and harrowed it, and sowed it with three bushels of small, or three and a half bushels of large white peas to the acre. After they had been washed in strong brine and rolled in plaster, they were ploughed in on the top of the sod—when out of the ground one or two inches, plastered five or six pecks to the acre, and had from thirty to forty bushels per acre—then in the fall, turned back the sod and manured it, sowed it with wheat as before stated, and have had from forty to forty-five bushels per acre. The third season, have taken a crop of from eighty to one hundred bushels of corn per acre. And the fourth stocked it down with barley. This I have found a good course, when my ground was in heart, so that it would answer to take from it four crops of grain before stocking with grass. With this mode of husbandry, as will appear from following out the above calculations, my land has afforded me a handsome profit.

The raising of stock—I have as yet paid but little attention to this part of husbandry. However, I would observe, that the stock should always be so proportioned to the size of the farm, that they may on the one hand be kept in good condition, and on the other consume all the hay and other fodder which is grown on the farm.

I cannot close this address without recommending to the members of this society more attention to the implements of husbandry, especially those which diminish hand labour; particularly *the horse rake.* With this implement, one of my workmen with one horse and boy to ride, raked in three hours five acres of grass, yielding three tons per acre. Also *machines for threshing and cleaning grain.* I have one, of Ballou's Patent, erected in my barn, by which four men and a boy, and a yoke of oxen or a span of horses, can thresh more than twenty-five bushels per hour.

If our farmers will but awake to a sense of their interest, break the shackles in which custom has bound them, and pursue the proper method of clearing, fencing, ploughing, manuring and cropping their land, the day cannot be far distant, favoured as we are with an excellent soil, when this county will rank with the most productive, and among the most wealthy in the state. Calculate for yourselves, gentlemen, the saving of expense in cultivating a farm after the lots are well arranged and fenced, and the old rubbish and stones removed; both as it respects labour, and implements of husbandry.—When your lots are well prepared for crops, one horse with suitable ploughs and harrows, will answer all the purposes of two, except to plough or harrow stiff sward or clay. It is in the saving of labour and increase of crops that we must expect to increase the profit of our farms. It has once and again been said that the poor man cannot afford to cultivate his farm in this way—but it is a grand mistake; it is the rich man only that is able to bear the prodigal waste of time and money in half clearing and fencing—half saving and applying his manure—half ploughing and harrowing—half preparing and putting in his seed—and half harvesting and securing his crops. This is the way to make a rich man poor, instead of making a poor man rich.

Let me entreat those farmers who feel unfriendly to this society—those who are incredulous on this subject, and those who do not believe that such large crops can be produced as have been frequently reported to this society, and attested by the best authority, to try the experiment on one lot and keep an exact account as respects quantity of crop and the true cost.

I should be glad to see a liberal premium offered to the person who will raise the greatest quantity of grain the ensuing season upon an acre of old improved land, with the least expense. I am well aware that impositions have been practised upon this society, but shall this destroy it? No. Let us rather cherish it—it has already been productive of great good.

There can be no doubt but in the past year one thousand bushels more grain have been raised in the town in which I reside, through the stimulus of this society, and that other property has been increased in the same proportion, amounting to more than one thousand dollars. Admitting the same competition has been produced in the other towns, we may safely calculate that this society has increased the property in the county of Saratoga more than eighteen thousand dollars. Let us suppose agricultural societies equally cherished in other counties, and we have an increase of property to this State, through their influence, of more than a million and a half of money *annually.*

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* Shallow ploughing and the application of manure on the surface, is contrary to the common theory, as it is contended by some writers, that the manure loses its strength by evaporation, when so much exposed to the sun. There may be some loss by this exposure, but not so much as there is by ploughing it in deep. I should always wish, however, that the manure, after being spread from the wagon, might be immediately mixed with about one inch of the surface, either with the plough or harrow, after rolling, as the decomposition is much quicker when it comes in contact with the soil, and in this situation it becomes a better conductor of the vegetable elements to the plant. Keeping the vegetable mould as near the surface as possible, I have found not only a great preservation to the plant against the frost, heavy rains, and severe drought, but the sod below absorbs the wash of the manure, and thus prepares it well, when turned back for the next crop. As our new lands are much surer for, and more productive of crops, where the vegetable mould is all on the surface, the nearer I approached the same principle in cultivating the soil, the better I succeeded in raising crops. I have received more benefit from three loads of manure applied as above stated, than from five, when ploughed in deep. I am of opinion, that the strength of our soil could never be exhausted with a proper rotation of crops, where all the manure which they produce, is carefully preserved, and once in four or five years properly applied to the surface. This, I think, has been fully verified by our new lands; for, after taking more than one hundred and fifty tons of timber from an acre, it generally produces our heaviest crops of grain and grass.

Can any man have proper views of national economy, or be a friend to the best interests of his country, who instead of cherishing, would raise his voice for withdrawing the patronage of the state from an institution productive of so much good.

Laudable and becoming exertions. are made in this our land of peace and plenty, to instruct our youth in almost every art and science, and shall we not look forward with fond anticipation to the period as not far distant, when we shall have seminaries also for teaching this most important, though much neglected art—the art of husbandry. It is the fountain from which we obtain our wealth and earthly happiness. Let us then continue to unite our exertions with the exertions of those who have recommended and patronized the best interests of the state, until the science and practice of agriculture shall excite that deep interest and that universal attention, which its high importance demands.

To the ladies who patronize this Society, after what they have here exhibited of their industry and economy—those brightest ornaments of the female part of community, compliments are useless. The works of their own hands praise them. May others be stimulated to go and do likewise.

PROCEEDINGS OF AGRICULTURAL SOCIETIES.

The *Agricultural Society of the Valley* (Virginia) met in the Town Hall, at Winchester, on the 5th ult.—whereupon W. M. Barton, *vice-president* of the society, announced in feeling and appropriate terms, the death of their late president, Judge Hugh Holmes—pronouncing at the same time an elegant and deserved eulogy on the character, zeal and services of the deceased.

On motion of Mr. Sherrard, the following resolution was adopted:

Resolved, That the members of this society will, as a testimony of the respect in which they hold the memory of their late president, the hon. Hugh Holmes, wear crape on the left arm for thirty days.

The society then proceeded to the transaction of ordinary business.

Letters were read from the hon. James Barbour, the hon. P. P. Barbour, Messrs. J. F. Dufour, J. L. Richardson, and R. K. Meade. the latter enclosing an essay of 12 folio pages from J. H. Powel, secretary of the Agricultural Society of Pennsylvania; which were ordered to be recorded.

On motion of Mr. Nelson,

Resolved, That a committee be appointed, to meet quarterly, whose duty it shall be to take into consideration such communications as may be addressed to the society, selecting such as may appear to said committee advisable to be read at its meetings.

Whereupon it was

Resolved, That the trustees of the society compose such committee.

Resolved, further, That said committee be authorized to transact all business now before the society, not before any other committee.

On motion of Mr. Brome,

Resolved, That a committee of five be appointed to receive the reports of competitors for the greatest average crop raised on their lands, and for the greatest quantity of stone fence made, during the last year, and report at this meeting.

Whereupon, Messrs. Page, Parkins, Ficklin, Lockhart, and Robinson, were appointed.

On motion of Mr. Brome, amended by Col. Kiger.

Resolved, That a committee of seven be appointed to draw up a scheme of premiums to be awarded at the next fair, no one premium of which shall exceed 20 dollars; which report shall be final, and not subject to alteration or amendment by the society.

Whereupon, Messrs. Cramer, Davis, Lockhart, Meade, I. Hollingsworth, Kiger, and Ship, were appointed.

Adjourned till 3 P. M.

3 O'CLOCK, P. M.

Met pursuant to adjournment.—The society proceeded to the election of officers for the ensuing year; previous to which the following resolution was offered, and unanimously adopted as one of the standing rules:

Resolved, That hereafter, when but one person is nominated to any office, no balloting shall be necessary.

The election of President being then in order—

Mr. M'Guire nominated *Judge Tucker.*

Mr. Davis nominated *Capt. Barton.*

Mr. Earll nominated *Major Mason.*

Judge Tucker and Mr. Barton both declined being voted for.

Judge Tucker nominated *W. B. Page, Esq.*

Judge Tucker and Gen. Lockhart were appointed tellers, and proceeded to count the votes. After which Judge Tucker rose and said,

Mr. Chairman, the tellers of the votes have proceeded to count the votes given by the members, and find the result to be, that there are,

For Wm. Byrd Page, - - -	18 votes
Seth Mason, - - - - -	3 votes

The chairman then stated this result to the society, and announced that Wm. B. Page, having a majority of the votes of the society, was duly elected president of the same for the ensuing year.

The other officers were then elected without opposition, as follows:

Wm. M. Barton, *vice-president*,
Thomas Cramer, *secretary*,
Samuel H. Davis, *assistant secretary*,
John M. Brome, *treasurer.*

On motion of Mr. Sherrard,

Resolved, That a committee of three be appointed to choose the board of trustees for the ensuing year.

Whereupon, Messrs. Sherrard, Heiskell and Cramer were appointed; who reported the following gentlemen as composing the list:

Wm. M. Barton, Seth Mason, Joseph Kean, Joseph Hackney, James M. Hite, Josiah Lockhart, John W. Baylis, A. S. Tidball, David Bryarly, Isaac Hollingsworth, John W. Page, Wm. Smith of Shen.

The committee on crops and stone fence reported, that they had awarded the premium for the latter to Mr. John W. Page.

The following new members were admitted—Daniel Lee, John Lee, George F. Hupp.

WM. M. BARTON, *Vice-Pres't.*

Thos. Cramer, *Secretary.*

AGRICOLA AND HIS TEESWATER STEER.

TO THE EDITOR OF THE AMERICAN FARMER.

Philadelphia County, March, 1825.

Sir:

It is to be lamented, that "Agricola" had not allowed himself time to inquire, upon two points, wherein his assertions, and inferences, are deeply involved. 1st. Whether Mr. Lowry's steer was of Teeswater blood. 2ndly. Whether "Teeswaters" and Improved Durham Short Horns, are the same.

I aver, that Mr. Lowry's bullock had not one sixteenth of Teeswater blood. Mr. Lowry's statement will prove, it cannot be shown, that he had one drop; and no man who is not wholly ignorant of the subject, could suppose, that the *old* Teeswater Short Horns, of '74, are the same as the *Improved* Durham Short Horns of '25.

Even if it could be made to appear, that he was of Teeswater blood, from "the fact, that he obtained a premium at the Philadelphia Exhibition, of 1822," where *no premium was offered, where none was given for a Teeswater*, or *Short Horned Steer*, and no animal was so called, by the committee of graziers, nor by the Society, can any inference be drawn, to favour Agricola's views?[*]

This mal adroit effort, and ignorance of fact, "remind me" of a professional writer, who, whilst making a pointed critique, upon a foreign essay, on the management of flax, was opportunely interrupted. by a brother Vice President, of the City Agricultural Society, to whom he exclaimed, "conceive, Mr. S——, the blunder of this Frenchman, asserting, that flax is the fibre, growing without as bark, instead of being produced within, as pith of the plant."

If a friendly Vice President had been near to Agricola, perhaps he might have guarded him from discomfiture, by saying, "You are as wrong, as if you knew not '*pith*' from an attenuated '*fibre*,' which, although when artfully woven, conceals naked deformity from those who are distant, yet when awkwardly spun out, becomes as the flimsy web of a busy spider, disregarded, or swept down by all who are near."

CURWEN.

AGRICOLA ANSWERED BY MR. LOWRY'S STATEMENT.

The Steer which I fed, and recently slaughtered, was brought to the Philadelphia market, to be killed, when a calf, for veal. *I have never heard by whom he was bred, nor of what breed his sire and dam were called.* At the Cattle Show, held by the Philadelphia Society, he was called Teeswater.[*]

PHILIP LOWRY.

HORTICULTURE.

ON THE DISEASES OF VARIOUS FRUIT TREES,

AS THE PEACH, MORELLO, AND PLUM,

With some remarks on the natural history of the Peafly—*in a letter from James Worth, Esq. to Col. J. H. Powel, corresponding secretary of the Pennsylvania Agricultural Society—dated Buck's county, 1st January,* 1824.

[We have omitted what has been well said by Mr. Worth on the subject of the *insect*, by which peach trees are assailed and destroyed, because we consider that part of the subject as exhausted by what was written within the last year by Mr. Worth, and published in the transactions of the American Academy of Sciences at Philadelphia; and by the very satisfactory papers of Evan Thomas, jr., published in the last volume of the American Farmer. If any doubt the efficacy of the remedies proposed, they have only to see and judge for themselves, at the farm of P. E. Thomas, four miles from this city. They may there see trees, which still bear marks of having been on the verge of death, recovering and putting forth with renovated health and redoubled vigor. Were any son of Esculapius to minister with equal effect, against the ravages of old age and disease, upon the human frame; he would be considered a second St. Leon, armed with the philosopher's stone, to communicate the power of flourishing in perpetual youth, amidst the wreck of all surrounding matter. But to our subject. For the reasons above stated, we have omitted here the observations of Mr. Worth in relation to the *insect*, which attacks the *peach tree;* thinking it would be more acceptable to confine ourselves now, to what he says of *other* causes of decay in the Peach tree, and to his remarks on the diseases of the Morello cherry and plum tree, which have been hitherto less treated of. His observations on the Pea fly, too, will be found amusing, as well as of practical usefulness.]

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[*] On being asked by whom, Mr. Lowry observed, he did not know—he supposed by the Committee. See Report, vol. 4, page 123, Farmer.

There are causes of decline in the Peach tree, other than that of the *insect;* and a principal one is, the not stirring of the ground. I apprehend that the disease called "yellows" is often thus occasioned. My peach orchard was evidently in a declining state; the ground had not been ploughed for three years, and had become quite covered with grass: in the spring of 1822, I had it well broken up, and kept clean during the summer. The trees soon assumed a healthy appearance, and furnished a plentiful supply of fine fruit; last year I again ploughed the ground, and the whole orchard is now in the most flourishing condition, and I believe there will be no difficulty in keeping it in that state.

I would further observe, that although there are many of our most delicious peaches which ought to be continued by budding or grafting, yet, there are several excellent kinds that are natural fruit, which can readily be propagated by planting the seed, and therefore should be particularly attended to; bebecause in the event of a decline, it is only to cut down the tree at the surface of the ground, when a new shoot will arise from the root, which will bear fruit the second year of its growth.

Morello Cherry.—I consider this the most useful species of the cherry; but it has become scarce, and in consequence of the failure of the tree, its cultivation in this district of our country is almost abandoned. The decline has been supposed to be occasioned by the depredation of a worm working in the outer branches, and producing the exerescences which are there observed; but on a close examination, I found that these excrescences were formed about a month before the worm could be seen, and then it commences its operations on the outside and proceeds inwards; so that it is evidently a consequence, and not the cause, of disease. This discovery led me to believe, that the excrescences were a mere exudation of the sap in the tender branches, occasioned by a bark-bound state of the trunk; and I was induced to try a remedy which had been mentioned to me, (without any accompanying reason,) to wit: to score the bark in a perpendicular direction along the trunk, and I found several decisive advantages attending the operation; but great care must be taken to perform the work, at a season, when the incision will be completely closed before a lodgment of insects can be made, or the tree will be in great danger of being destroyed; the more safe way will be to cut through the outer peel, so as to leave the inner bark untouched. But from a further attention to this valuable tree, I am of opinion that its failure is, in a great measure, owing to the circumstance of its being generally propagated by suckers: and if such be the fact, we should find a very easy remedy in raising new trees from seeds.

Plum tree.—This tree is attacked by a disease similar to that of the Morello, as already described; but as far as my observation extends, it is confined to the natural fruit bearing kinds, and these being mostly propagated from suckers, whilst those of the nurseries, raised from seeds, are exempt,—it would seem that the cause of disease must be in the manner of propagation; and I know of no better way of removing it, than by cutting down the trees and raising new ones from the root. But even these probably cannot be preserved many years in a healthy state; and therefore we should lose no time in planting seed to supply their place. I would advise the selection of the best seeds: and trees thus raised, should be suffered to come to a bearing state before any change of kind is made, and then, graft or bud only such as are of inferior quality: as according to my limitted experience, trees in a natural state are the most lasting.

I am informed, indeed I have seen some instances, of the grafted trees being diseased in the trunk, and a worm is found in the diseased part; but I have not had sufficient opportunity of investigating the cause: the grafts may have been set on suckers, which are unable to sustain a healthy tree, and therefore the worm may only be the *consequence* of the decline. If, however, the stocks are seedlings, then, the disease is probably occasioned by the worm. I have no doubt but there are many individuals who are well acquainted with this interesting subject, and by publishing their views, they would render the community an essential benefit. I respectfully invite their attention.

Pear tree.—It is a fact that this tree, too, has unfortunately been, in a great measure, propagated from suckers; and therefore its failure may be accounted for: as soon as disease is observed, the whole of the shoot connected therewith, should be lopped off. I am, not at present, prepared to say much on this head, but the subject being an interesting one, I would recommend it to the consideration of the members of the society.

[See observations of Evan Thomas, in last American Farmer.]

Pea-fly, (*Bruchus pisi.*)—This insect is known to infest the peas of our country, and although it is not supposed to have done any material injury, yet, the inquiring mind, awake to every species of knowledge, must feel an interest in the investigation of its history; especially as some very erroneous statements respecting it have gone forth; besides, I do think that every lover of peas would rejoice in getting rid of so unwelcome a visitor.

The winged insect need not be described, as every person who has cultivated peas, is acquainted with it: it continues in that state until the peas are sufficiently grown to receive the deposite and support the larva. The eggs which are oblong and of a yellow or amber colour, are then lain singly, and scattered along on the outside of the pod in an irregular manner, in number, sometimes less, but often more than there are peas within the pod; so that frequently two worms are found in the same pea. The little maggot scarcely discernable, except through a microscope, is of a whitish colour, at first its head is black, but afterwards becomes brown: it perforates the pod immediately under the egg-shell, and passing through, enters the pea and penetrates to the very centre, and in some instances destroys the germ: the entrance of the worm can be detected by a dark speck on the outside of the pea. The very early peas are not so much infested, at least when in an eatable state the worm is very small; and sometimes the very late kinds will escape, and therefore it has been recommended to plant later than usual, in order to avoid the insect; but it has too much sagacity to be thus defeated; for as soon as the practice becomes general, the deposite would be delayed to meet it. The most effectual remedy is, to destroy the insect; which can be done without much trouble: when the seed peas are sufficiently dry, put them into a bottle and cork them up until the time of planting, then prepare a vessel of water, into which pour the peas immediately from the bottle, as soon as uncorked, immersing the mouth of the bottle in the water, so that none of the flies can escape; the flies will soon leave the peas and rise to the surface of the water and cannot extricate themselves after being once wet, but care must be taken to kill them. Very respectfully, yours,

JAMES WORTH.

Sharon, April 10, 1824.

P. S. On planting my peas this spring I have discovered that many of the flies do not leave the peas on being immersed in cold water, and that after remaining therein thirty-six hours and afterwards buried in the soil, they made their escape, but that such as were thrown into boiling water, the insect contained within were instantly destroyed without injuring the vegetating principle. J. W.

INTERNAL IMPROVEMENTS.

RAIL ROADS.

Sir.—In the Richmond Enquirer of the 12th and 19th Dec. 1818, there will be found two papers, entitled "Virginia—*her resources and ability to secure the western trade to Richmond and Petersburg.*"

The object was to be obtained by a sedulous attention to an improvement of her highways.

I have long been of opinion, that, as auxiliary to this improvement, Iron Railways could be highly useful.

As a proof of this, I refer to your journal of 28th April, 25th August, and 29th Sept. 1820. I could also refer to the Richmond Enquirer of the 25th June, 1819.

I think these references would prove that I have clearly anticipated public opinion; for the people of Pittsburg thus argue:

"That by means of Railways, which can be completed *at one third of the expense* and *in one third of the time* requisite for canals, Pennsylvania will be able successfully to compete with New-York. That by this *simple* and *easy* means of communication, Pennsylvania will become the carrier for the trade of the western waters. That the *plan proposed*, if at all eligible, is *better* adapted than that of *canals*, to their general resources, and the general economy of their habits. That it will have the *incalculable advantage* of retaining in their *present* employment, the immense number of our meritorious citizens who now derive their subsistence from our peculiar system of inland navigation. That it is better adapted than the other to their manners and views, and will have a tendency, from the quantity of Iron it will require, *to give new life and vigor to their extensive establishments of that article.*"

It is superfluous to state that numerous applications are to be made during the present session of the British Parliament, for acts of incorporation on this subject.

In the Richmond Enquirer of the 11th inst. I find a letter addressed to Mr. Barbour, the new secretary of war, and on its analysis, discover the following to be its contents:

"From Richmond to Ohio, where a canal would commence, is 450 miles.

The fall in the Ohio between the Kanawha and the Sciota, is one inch per mile.

The mouth of the Kanawha is 250 miles below Pittsburg.

The fall between these two points is 275 feet.

The inference is, that the navigation of the Ohio above the mouth of the Kanawha, for steam, is impracticable for a part of the year.

The Chesapeake and Ohio canal is 350 miles.

The country both sides of the Ohio below the Kanawha, is 250 miles nearer to Richmond than Washington.

A larger portion of country would be benefited by this canal than can be by that of the Chesapeake and Ohio.

In the valley of the Kanawha the ground for 94 miles is peculiarly favourable.

A tunnel may be made at the White Sulphur Springs.

The James and Kanawha would require 750 feet of lockage less than the Chesapeake and Ohio.

The Erie canal of New-York cannot compete with the proposed canal.

The Richmond market would be the cheapest, shortest and most convenient.

Distances—if the canal, from the mouth of the Sciota to Lake Erie was completed, and that a merchant, *half-way* between the Ohio and the Lake, wanted to send his produce to an Eastern market, the distances would be—

	Miles.		*Miles.*
To the Lake. . . .	150	To Sciota, ...	150
Buffalo, ...	250	Kanawha. . . .	80
Albany, ...	350	Richmond, . .	450
New-York. . .	150	*Difference*.	220
Miles, .	900	Miles, .	900

It has an advantage in its southern position, and consequently longer exemption from frost.

Advantages of the country S. W. of Bottetourt, Virginia.

The waters of the Kanawha. (here called New River) interlocking Holstein and Clinch so as to render it probable a canal is practicable.

It would unite the vallies of the James and the Kanawha; and of the Kanawha with those of the Tennessee.

Richmond would become the great emporium of the commerce these canals would unite.

Salt, coal, alum, copperas, gypsum, marble, iron, copper, lead, &c. are found in inexhaustible quantities; and the counties of Bottetourt, Rockbridge, Wythe, Washington and Kanawha, could supply the whole union with these essential articles.

"A Virginian" will permit me to ask him why a rail-road would not do as well as a canal? If he will refer to the various British publications on the subject, I think we shall not differ in opinion.

But it is to be considered whether a combined effort on the part of Ohio, Pennsylvania, Maryland and Virginia, would not render the achievement of the task, both easy, cheap, and expeditious.

Could not the road be made to come in one line to a given point, and then branch so as to bring the produce to Philadelphia, Baltimore and Washington? But where, then, is the Richmond scheme? Here will be a difficulty. However, there is room for all the improvements; and in that which embraces the commerce from the S. W. of Virginia will be found an immense source of wealth. While the Potomac, or left wing, on the one side, brings down the produce of the Ohio to its ports—the James, or right wing, will waft down that of the Clinch and the Holstein. All the populous and consuming part of North Carolina, would feel an interest in this portion.

To obtain a knowledge of the favourableness, or unfavourableness of the ground, is indispensable to a correct opinion of the actual state of things; but, to me, there appears little doubt, but that Ohio would prefer either of these routes to her way by Lake Erie to an already (and likely to be more so,) glutted market.

As to the facilities afforded by rail-ways, it is more than probable that our amiable and patriotic representative at St. James, will give us some knowledge of them on his return—the London papers have said they were objects of his attention.

But a measure is now before the Pennsylvania legislature; namely, the formation of a board of works, which will, in all probability, give us some insight into its merits *on an extended scale;* and, especially aided, as it is said the board will be, by the patriotic efforts of some public spirited gentlemen at Philadelphia, who have (or are about to do so,) despatched the ingenious Mr. Strickland to England, on a voyage of scientific discovery.

I may be wrong, but I think the recent result of the Presidential election strongly urges some step of this kind. It will unite the southern and the western states: for, no one can deny the possibility of the Chesapeake and the James, with their numerous ramifications, being able to vie with the Hudson—to say nothing about incorporating Pennsylvania with the Delaware in the scheme. She is fully alive to the necessity for the most active exertions.

I am, &c. AMPHICON.

P. S.—The Pittsburg memorial states, that $8,000 a mile would complete a rail-way, and the transportation of goods on the same would be cheaper from Pittsburg to Philadelphia, than it can be afforded to New-York from any navigable point on the Ohio.

South Carolina, March 18th, 1825.

GAS ENGINE CARRIAGE.

From a late English paper.

The public are likely soon to be furnished with a locomotive carriage for general purposes. A company is actually forming, the subscriptions to which are nearly full, for the purpose of contracting to run the mail coaches and other carriages by means of this engine, supplied with portable gas. The great weight of steam engines, with the requisite supply of coal and water, has hitherto prevented their successful application to locomotive carriages. This formidable obstacle is altogether removed by Mr. Brown's invention, as we understand that a six-horse-power engine will certainly not weigh ten cwt. and the portable reservoirs requisite to supply the engine with gas for an hour and a half for fifteen miles, will not weigh one cwt. more. It is expected that a carriage will be completely ready to start in four months, when it is intended to be dispatched to York and back, at the rate of ten miles per hour; the expenses are estimated at less than one half the mileage of a four-horse post coach.

MISCELLANEOUS.

FOR THE AMERICAN FARMER.

EXTRACTS FROM THE NOTE BOOK OF A DESULTORY READER.

STEAM.

A steam apparatus has been recently erected at St. Pancras workhouse, where a boiler of sixty gallons heats a stone bath of four hundred gallons, several times in the course of a day; for bathing sick persons, boiling blankets, beds, &c. From the same boiler, is also boiled one eighty gallon copper for washing; one eighty-five gallon ditto for cooking; and one thirty-six gallon for the same purpose; all performed by one bushel of coals per day Similar work is done at St. Andrew's workhouse, with three pecks of coals per day.

At Cheltenham, the late Mr. Thompson not only heated his baths with steam, but also the air of the dressing-rooms.

At Mr. Ramshaw's, Fetter-lane, a steam apparatus has been introduced for copper-plate printing, which supersedes the use of twelve noxious charcoal fires.* Steam has also been applied to the warming of hot-houses.

In the application of steam to the boiling of liquids, as at Whitbread's brewery, London, by means of a worm conveyed through the midst of the liquors, five or six hundred barrels of wort are boiled in half the usual time, and two chaldrons of coals are saved in one day. Steam has also been introduced into many other breweries. No other copper is requisite besides the steam-boiler; the wort and liquors being boiled in wooden vats. It is likewise used for the purposes of distillation.

The following is a summary of the advantages which will result from substituting steam in place of culinary fires, for the heating of houses, &c.

1st. Steam saves half the quantity, and three-fourths of the cost of coals or other fuel.

2d. Steam can be made to create any degree of temperature required.

3d. Steam diffuses heat equally throughout an apartment,-every side and every part being as warm as every other side and part; and the people in a room, are not (as with fires) frozen on one side, whilst they are scorched on the other.

4th. Steam, as diffused in metallic enclosures, creates neither dirt, dust, nor noxious odour.

5th. Steam is free from the dangers, which attend common fires: for no house can be set on fire by the heat of steam; and there is no hazard of the dreadful accidents which arise from the clothes of females and children taking fire.

6th. Steam warms not merely the room into which it is conveyed, but all the adjoining rooms; and if made to act in a cylinder at the bottom of a well staircase, or in the hall of a house, it will increase the temperature of the whole house.

7th. Steam, by causing the heated air to ascend, promotes the ventilation of a room, and the renewal of the air, by means of an orifice and pipe in the upper part of that room.

8th. Steam renders chimneys and fire-places unnecessary; and will, therefore, diminish the expense of building houses.

9th. Steam will heat several small houses from a common boiler at a joint expense.

10th. Steam will warm the largest as well as the smallest apartments, and parts remote from the boiler, as highly as those near; that is to say, would warm the Cathedral of St. Paul's, and every remote corner of it, as completely as the smallest cabin.

11th. Steam renders kitchens and fires unnecessary under the roof of a dwelling; as it can be conveyed from any out-building to a cooking apparatus.

12th. It puts an end to the use and employment of the wretched climbing-boy. In a word, the introduction of steam for generating and diffusing heat, is likely, not only to change the entire economy of our houses, but to promote comfort, health, cleanliness, and security, beyond all former anticipations of art or genius.

MILK.

One hundred pounds or wine pints of rich milk will make five pounds of butter. A pint of milk, wine measure, weighs a pound, and five pints beer measure, is equal to six pints wine measure. In New-England, they speak in common parlance, and in their Cattle-Show reports, of the pounds of milk that a cow will yield.

OXEN

In New-England are measured in strength and value, by their girth. A good judge will guess within two inches. Seven feet girth is considered a good Ox, and a pair of them will do all the work of a common farm.

DECOMPOSITION OF MILK BY ACIDS.

To a pint of new Milk, in a glass goblet, add half a dram of diluted Sulphuric Acid: an immediate change will take place in the whole fluid; by the descent of a white flocculent and abundant precipitate, some parts of which coagulate in masses. This precipitate is what is termed the curd; and the supernatant fluid is the whey.

Observation. Here the acid combines with the water of the milk, consequently the albumen, gelatine, and oil, are precipitated. A very ready and elegant mode of procuring curds, and also a very pleasant acidulous whey, is by using a solution of the crystallized citric acid; taking care not to add too much.

QUERIES OF CORRESPONDENTS,

TO WHICH IT IS HOPED OTHERS WILL MAKE ANSWER.

Will some of your numerous and obliging correspondents who can speak from personal experience answer the following queries.

Is any power gained by working machinery with horses on an inclined plane instead of drawing by Levers?

---

* For this meritorious attention to the health of his workmen, the Society of Arts presented Mr. Ramshaw with the Isis gold medal.

Can horses be thus applied to any extent or is the method necessarily limited to the use of a few and to what number?

What is the most preferable diameter of the plane?

How many revolutions should it perform in a minute?

What angle should the shaft form with a line perpendicular to the centre of the plane?

Do the horses operate by their weight only or by draft also?

Can oxen be used instead of horses?

Has machinery thus put in operation been applied to threshing or grinding grain, and with what effect?

Whilst I am propounding queries I will also ask what is the proper quantity of unslacked lime to be applied to an acre of land intended to be put in Indian Corn?

In what manner and at what season should it be applied?

Is there any difference between lime burned from stone and that from shells? S.

March 18*th*, 1825.

[The queries on lime, are some of them anticipated in this number.—It is generally known that stone lime is much stronger than that of shells; the common calculation is about 60 of stone lime to 100 of shell lime; 100 bushels of shells will, when burnt, yield 60 of lime.]

ENGLAND.

[On the present condition of England, as regards her agriculture, commerce and manufactures—and on the effect of the removal of some old restrictions on trade, a late English agricultural journal, (*Fleming's Express*,) which is conducted with much ability, after speaking more in detail, concludes an article with the following remarks:]

At no period of our history has the general activity of agriculture, manufactures, and commerce, both foreign and domestic, been such as is now felt throughout the kingdom. In every country of Europe, and in the United States of America, great improvement in manufactures, and the arts, and commerce, must be admitted to have taken place—yet are trade and commerce in every branch improving, and extending in this country. India, from whence scarcely a century ago we derived every yard of fabrics made from cotton, now seeks in the looms of England, that perfection and variety, of which the cotton manufacture is susceptible.

In silk, the manufacture of which has been so long restrained in this country by impolitic restrictions, the ingenuity of our artizans is now called into activity by the impulse of capital, which under the regulations that confined the manufacture to London, would never have been applied to that object. For this we are indebted to the liberal reformation *begun* by ministers, in our commercial code. Prejudice has unfortunately so far interposed as to prevent the extension of the system in many desirable instances.

Such, for example, is the disinclination of the linen manufacturers of this country, to the warehousing of German linens in Great Britain, for exportation only, that the minister conceded this point, and foreigners are still driven to the continent to make up an assorted cargo. In wool, prejudice has succumbed to sound policy and common sense. The exportation of sheep's wool, so long prohibited by statutes, most arbitrary in their enactments, is now permitted by law; and last week presented the novel instance of a shipment of coarse wool for America, being the first legal exportation of our native fleece, during a period of two centuries.

We might justly dilate on the very many topics, tending to illustrate the growing prospects of the country, but our limits constrain us to withhold further observations.

That such is the actual state of the country, we hold to be irrefragably demonstrated; by the rapid progress and consumption of our manufactures, the increased and increasing value of our exports and imports; the abundance of employment for the working classes; the flourishing state of the revenue; the high price of the funds; the low rate of interest, and —the remunerating prices now cheerfully paid for every species of agricultural production.

ITEMS,

Relating chiefly to Agriculture—taken from late English papers received at the office of the American Farmer.

A sow and *eleven pigs* fetched the sum of *ninety-two pounds!* in Highworth market, on the 1st of this month. They belonged to Mr. W. Smith, of that town, and were purchased by Mr. Thomas Matthews, of the Swan Inn. [What was the age of the pigs, and were they the offspring of the sow?]

Dandelion.—This plant makes a pleasant salad in the spring, while the leaves are hardly unfolded. It is much used by the French, who eat it with bread and butter. It may be blanched by culture.

Parsley.—If after having bruised some sprigs of Parsley in your hands, you attempt to rinse glasses, they will snap or suddenly break.

Whooping-cough.—A plaster of gum galbanum, applied to the chest, cures this complaint.—*Medical Adviser.*

A gentleman of Henley-on-Thames offered a farmer when at that market, a dinner and a bottle of wine, if he would bring him a grain of wheat on the following market-day, and double the quantity each week until that day twelvemonth. This was acceded to for the moment; but the following statement will, perhaps, satisfy those who have never entered into any similar calculations; of the impossibility of fulfilling such an engagement: Amount of the number of grains, ... 4,503,599,627,370,494
Number of bushels, ... 12,509,998,964
Number of quarters, ... 1,563,749,870
Number of loads, ... 312,749,974

On Wednesday, was slaughtered by Mr. Lowden, of Norwich, a real Norfolk four-year-old home-bred, and grazed by Mr. Gooch, of Honingham—the carcase weighing 113 stone [1582 pounds], fat 14 stone 4 lbs. It is allowed to carry most meat upon the smallest bone ever seen, and of the best quality.—Two remarkably fine home-breds, of Mr. Culley's, of Drayton, and a heifer of Mr. Coleman, of Hellesdon, were exhibited on Saturday se'nnight, on the Hill, at Norwich; and sold to be slaughtered.

THE FARMER.

Baltimore, Friday, April 1, 1825.

AGRICULTURAL MEMORANDA

Of conversations in the office of the American Farmer; 29th March.

Mr. H. Watson, of Connecticut, on a visit to Maryland to purchase Jackasses and Jennets, bought $600 worth on the Eastern Shore of Maryland; he gave $300 for the very fine Jack of Dr. Gordon's, which took the La Fayette prize at the last Cattle Show at the Maryland tavern. This fine imported animal would not have there brought, at public auction amongst the farmers of Maryland, $100—yet Mr. Watson has a good *notion* of what he is about.

Mr. W. says, that in Connecticut, the calculation is to winter ten sheep on one ton of hay—for a cow, from a ton to a ton and a half—that the best merino flocks give about $2 per head clear profit, besides the increase—that they average in the dirt from 4 1-2 to 5 lbs. per head—that their good pasture lands will carry five sheep to the acre. Mr. Watson has made a rapid excursion from Rockhall through Chestertown in Kent county, Centreville in Queen Anne's, to Easton in Talbot, taking the estate of colonel T. Emory in his way—admires much the appearance of the country, thinks it would yield good crops of *barley*, and insists that were he on that land and in that climate, nothing should induce him to forbear the use of oxen, (New England oxen) to the exclusion of horses.

30th March.

Dr. S. McCulloh—visited last summer, the new garden of the Horticultural Society of London, at Chiswich. He there saw their over-flowing well, obtained by boring, the stream as thick as his arm, of fine drinking water; it was turned to the greatest advantage over their grounds, for the purposes both of ornament and utility—in the formation of small lakes and the irrigation of the garden. To the question as to the surrounding country, he says it is level as the lands on the Eastern Shore of Maryland, as far as the eye can reach—no over-hanging. or neighboring higher grounds.

Agricultural reports.—*State of crops.—Winchester, Va.* 16*th March*, 1825.—My crop of wheat is more promising than I ever had at this season. It is particularly the case with a field of forty acres, on which grew a heavy crop of oats that was ploughed under in August.

Tobacco—There have been scarcely sales enough of this article since our last, to serve as an index to the state of the market; which, however, on the whole, appears to open favourably for tobacco of inferior and middling qualities. These descriptions may be quoted at twenty per cent. advance on the prices at which they were selling at this time last year, while bright tobacco is as much below what it then was; such as then would have brought $30 per hundred, would probably now bring not more than $20.

Three hogsheads of W. Smith's, of Calvert county, opposite to Nottingham, sold this week for $12 round.

There have been 113 hogsheads inspected within the week—generally in rather damp condition—especially that from Ohio, where tobacco is indeed mostly packed in too high order.

Wool—*washed on the sheep's back*—sells at an advance on the prices here quoted of 20 per cent.

The Maryland Association for the improvement of the breed of horses, *at a meeting held on Wednesday,* unanimously elected J. S. Skinner, a Vice-President of the Association, in place of the late General Harper. On motion of Mr. Skinner, the Society resolved to offer purses for horses owned only, and *bonafide*, by persons residing within the State of Maryland and the District of Columbia, north of the Potomac.

A few of our Patrons have forgotten to withdraw their subscription from the American Farmer, until after they had received the first number of the 7th vol.—In all such cases, they are requested to send back the numbers received, as not one more is printed than will be wanting.

The Index to the last vol. of the American Farmer, will be sent to subscribers along with the title page, early in next week.

Wanted to purchase, one or two *thorough bred* stallions of large size. Inquire of the Editor of the American Farmer.

SEED, GRAIN, PEAS, BOOKS, &c. &c.

Deposited since last notice with the Editor of the American Farmer, for the use of his subscribers.

Italian savoy cabbage seed, sent by Elkanah Watson, Esq. originally sent in by the American Consul at Naples, they have been tried by the Shakers at Lebanon, and reported to be a new and valuable variety. The parcel received, was not more than ¼ of an ounce, and they have been distributed.

Gourd Seed—From gourds three feet long resembling the Club with which Hercules struck off the heads of the Lernean Hydra. The seed and gourd from Mr. Rowe of Boston.

Yellow Corn, Early and beautiful, two small ears, from Demerara, by John Law, Esq.

Peas, the black or tory pea of North Carolina; a barrel from Gen. Calvin Jones of that state.

Last report of the canal commissioners to the Legislature of New-York; from Gen. Van Ransellear.

Tracts, put forth by the Pennsylvania Society for Internal Improvement, from that indefatigable advocate of American Independence, Mathew Carey, Esq.

John Bull, a cutting satire on the lying journals of English Travellers in America; from the author.

Address, to the Agricultural Society of Philadelphia, at their annual meeting in January last; from the enlightened and benevolent author, Robert Vaux, Esq.

Two Speeches, delivered before the convention at Utica, for the nomination of a Governor, by C. G. Haines Esq. on the character and public services of that eminent benefactor of science, and of his country, De Witt Clinton.

COMMERCIAL RECORD.

From a Liverpool Price Current, of Feb. 19.

The demand for Cotton since our last has been extremely animated, and speculators as well as the trade have bought freely at the following advance, viz: Pernams, 3-4 a 1d; Maranhams, ½ a 3-4; Boweds, New-Orleans, Alabamas and Tennessees, ½ a 3-4d; Sea-Islands, 1 a 1½d, and Egyptian ½d per lb. In East India Cotton no alteration. The public sales of Demerara yesterday went off with spirit at high prices, and holders of all descriptions are sanguine of further improvement. The total sales amount to 37,738 packages.

Ashes.—The demand for Pots has materially improved, and about 1100 bbls. Montreals have been taken chiefly by speculators at 33s 3d a 33s 9d. and 34s is now generally required; 160 bbls. States Pots sold as 39 a 39s 6d and no more offer under 40s. In Pearls the business is more limited; but prices are steady—100 bbls States sold at 39s.

Quercitron Bark in fair demand; 55 hhds. and 60 bls. Philadelphia, brought 13s 6d a 14s, and a few casks very inferior, 11s 6d.

Tobacco.—Since last week, about 2000 hhds have changed hands at an advance of ⅓d. a ½d. per lb. on all sorts.

The speculative demand for *Turpentine* has continued and nearly 4000 bbls. have been sold at 11s. 7½d a 12s. 6d. which establishes a further advance in this article.

Nothing done in *Tar* of any description, but prices steady.

The *Grain* market is dull, and Wheat at a decline of 2d a 3d per bushel.

American *Flour* goes off in small parcels at 24s. a 26s. in bond.

For American *Clover-seed* there has been a partial inquiry, but the transactions are limited, in consequence of holders asking prices, which the dealers are unwilling to give, and only 40 casks sold at 62s. for middling, and 69s. for good.

Flax-seed was quite neglected until the middle of the week, when a small parcel of New-York Sowing Seed was disposed of at 55s; but a speculator has since come into market, and taken 600 hhds. Philadelphia at 54s. and subsequently the remainder of the parcel (600 hhds) at 58s; besides which 200 hhds. New-York, Seed have been purchased at 60s. The orders from Ireland are extremely limited.

Letters from Marseilles inform, that "the French government have lately imposed an additional duty on the importation of Wool, in consequence of which, and of the increased demand for woollen fabrics, fine wools had risen 30 per cent. in the month of January."

NOTICE.

I will sell at public sale, at Upper Marlboro' on the first Monday in April, if fair, if not, the next fair day, my lands, adjoining the Woodyard and the Millwood Estate, containing 1002½ acres, more or less. The soil is of first quality, adapted to corn, wheat, and tobacco of the best kind, and susceptible of improvement, where necessary by the aid of clover and plaster, no land more so. There is the greatest abundance of wood and timber for the supply of this estate, and much to spare; low grounds for meadow in abundance, and a great deal already cleared and in rich growth of natural grass. There are three large tobacco houses, two of them with sheds and with wheel prizes annexed thereto. The houses for servants are many, and most of them lately erected, they are common but comfortable.

One third of the purchase money must be paid at the time of sale and the balance in one and two years with interest from the day of sale. Notes well endorsed, payable at the Planter's Bank of Prince George's county, must be given for the last two payments. The title is indisputable, and will be made through Mr. Benjamin Oden; and should any person be disposed to purchase at private sale, before the first Monday in April, they are referred to him, who is authorized to sell for me, either at private or public sale. Those lands lay within twelve miles of the City of Washington, and four of Upper Marlboro' the capital of the county, and twenty-four of Annapolis, the capital of the state; and on the above estate are 200 acres of clover in fine growth, 50 or 60 bushels of wheat, 30 or 40 in rye, and 20 or 30 in oats. There are large Orchards of the finest keeping and Cider Apples, and Peaches and Nectarines of the first quality. There are several Springs of the purest and coldest water with a full running stream through the centre of the land, on which it is supposed a profitable Mill might be erected. The growth of the Timber is of yellow and white poplar, black walnut, hickory, white and black oak; and all of the largest size, &c.

STEPHEN WEST.

April 1, 1825.

AGRICULTURAL IMPLEMENTS.

Persons wanting Implements of Husbandry will find it their interest to call at CHARLES B. PALMERS, No. 41 Light street, 7 doors from Pratt st. where he has on hand, Shaking Screen Wheat Fans, with iron backs, wings and axle; also, the Pennsylvania Wheat Fan, Corn Shellers, &c.

Pennsylvania Bar Share ploughs, from one to four horse; New York wrought iron Stand Posts, one to four horse; Connecticut or Yankee Plough, No. 1, 2 and 3; double mouldboard Ploughs; Self-sharping do.; left hand or German do.

Harrows, Cultivators, Hoes, Sieves, &c.

☞ All repairs done immediately.

Persons disposed to purchase will please call and examine for themselves.

Castings for Plough Manufacturers will be furnished low, if timely notice be given.

March 25

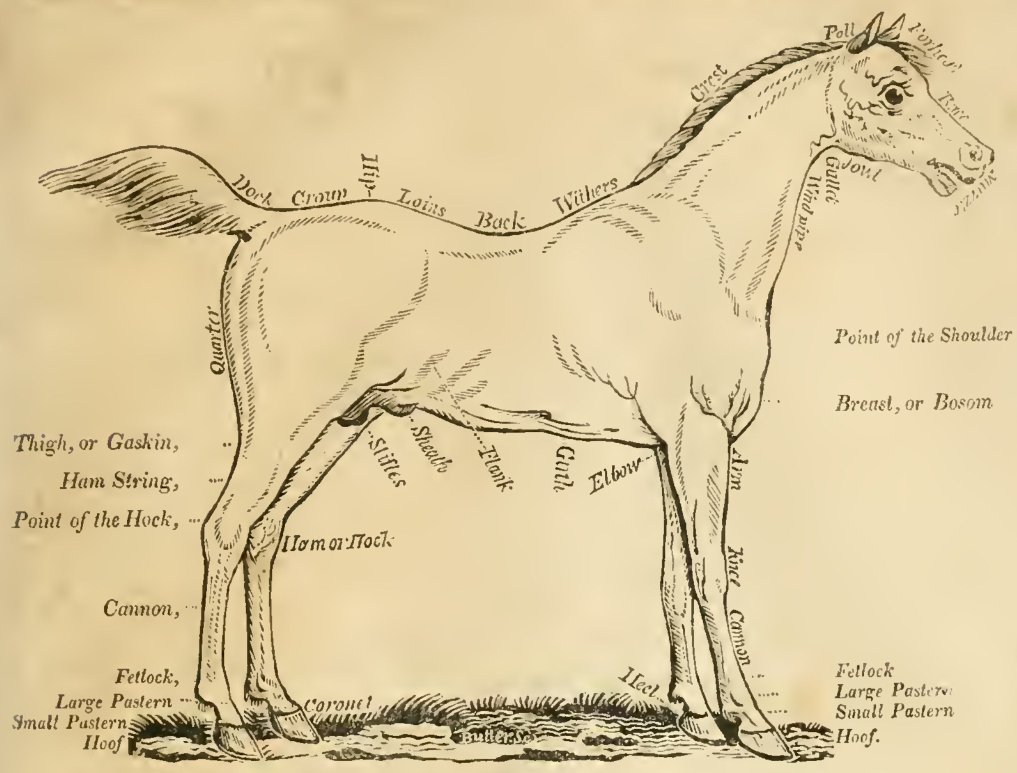
CONTENTS OF THIS NUMBER.

Stone Lime, on burning and use as a manure—On the importance of Industry and Economy, and on the management of land—Agricultural Society of the Valley—Agricola and his Teeswater Steer—On the diseases of various Fruit Trees—Rail Roads—Gas Engine Carriage—Extracts from the note-book of a Desultory Reader—Queries of Correspondents—Miscellaneous Items—Editorial and other Notices—Commercial Record—Advertisements—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9	9	10
BACON, and Hams, . .	lb.	7	8		
COFFEE, W.I. Green, .	—	17		20	
do. Common,	—	15	16	18	
COTTON, Louisiana, &c.	—	22	24		
Georgia Upland, . . .	—	18	21		
COTTON YARN, No. 8,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	10	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32	33		
FISH, Herrings, Sus. new	bbl.	none			
Shad, trimmed, new,	—	none			
FLAXSEED, Rough, . .	bush	75	80		
Cleaned, ...	cask				
FLOUR, Superfine, city,	bbl.	4 50	4 62		
Fine, ...	—	4 25			
Susquehanna, superfi.	—	4 50			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5			
GRAIN, Indian Corn, .	bush	35			
Wheat, White, new, .	—	90	95		
do. Red, do. .	—	85	90		
Rye, ...	—	37			
Barley, ...	—	50			
Clover Seed, ...	—	3 00	3 50	3 75	4 00
Ruta Baga Seed, . . .	—				
Oats, ...	—	20	22		
Peas, Black Eyed, . .	—	75	80		
Beans, White, ...	—	90	1 12		
HOGS' LARD, ...	lb.	9			
LIME, ...	bush	23	25		
LEATHER, Soal, best,	lb.	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	23	30	37	
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	5½	6	7	8
NAVAL STORES, Tar,	bbl.	1 75			
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2	2 50		
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	33			
RICE, fresh, ...	c.lb.	3			
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	20	23		
PEACH BRANDY, 4th pr	—	65	82		
APPLE BRANDY, 1st pr	—	20	22		
SUGARS, Havana White,	c.lb.	13 00	13 50		
do. Brown, . .	—	8 50	9		
Louisiana, ...	—	7 25	8 75		
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16		
SPICES, Cloves, ...	—	85			
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	2	2 25		
Nutmegs, ...	—	1 40	1 50	1 70	1 75
Pepper, ...	—	19			
SALT, St. Ubes, ...	bush	44			
Turk's Island, ...	—	49			
Ground Alum, ...	—	50			
SHOT, all sizes, ...	cwt.	9			
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. L. M. . .	—	1 75	2		
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Sherry, ...	—	1 10	1 15	1 50	1 75
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled,	—	30	35		

Printed every Friday, at $4 per annum, for JOHN S. SKINNER, Editor, by John D. Toy, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.



TERMS COMMONLY MADE USE OF TO DENOTE THE EXTERNAL PARTS OF THE HORSE.

PRIZE ESSAY,

Which obtained, in England, the reward of five pounds.

Essay on the External Formation or Structure of the Horse, and on the Disorders originating therein.

> Plerique omnes faciunt adoles-centuli
> Ut animum ad aliquod studium adjungant, aut ad equos
> Alere, aut canes ad venandum, aut ad Philosophos.
>
> Terence.

I purpose, in the following pages, first, to give a succinct, but, I trust, useful and explicit description of the exterior conformation—the *make and shape* of that valuable animal the *horse;* discriminating the *originally-well-formed tit* from the *cross-shaped*, and *likely-to-become-diseased brute*, and the *nag* that can go with safety and pleasantry on the road, or carry sixteen stone across a heavy country, from the *imbecile* and *weakly-constitutioned spider;* and, lastly, to show by what ready and certain modes we may detect unsoundness in the purchase of a *prad*, and *when* we are to pronounce that *he is perfectly sound.*

The Horse, in the estimation of a sportsman, stands pre-eminent above other quadrupeds, as man does above every other animal: not only do matchless beauty and strength of form, combined with unrivalled speed, distinguish him; but the extensive utility he is of to us, and the share he takes in our diversions and perilous enterprises, serve to inspire us with even a degree of affection for him. Every horse is adapted to some particular purpose; for horses not only differ in kind, but, like men, in utility, in temper, in stamina, &c. and the selection of them, in regard to these particulars, constitutes one of the most arduous and nicest duties of the *connoisseur:* he must readily acknowledge good or bad conformation,—trace genealogy in the outline, and discover a *je ne sais quoi* about the *tout ensemble* that denotes good or bad instinctive and unalterable qualities.

In describing the good and bad points of a horse, it will be necessary to make use of many terms, denoting different external parts, which, to all *horsemen* will not require any explanation; least, however, the reader be unacquainted with the meaning of some of those terms, a plate is annexed, having references to the parts themselves in the figure of a horse. It requires some experience, but more attentive observation, to be what, in modern *horse-phraseology*, is called a *good judge;* i. e. (if we were asked to define a good judge,) to know, *at once, by a cast of the eye*, whether the nag, as soon as he is *pulled out*, is *likely to suit*: is he *cut out for a hackney*, or is he *calculated for harness?* Does he *look like a hunter*, or has he any *good looks* about him? Does he *show any blood*, or is he *all over a mongrel?* In fine, is he *the sort of a thing* you want, or won't he do until he meets with a *green horn?* These, and various other important considerations we hope to unravel the nature of in the course of this inquiry; offering such remarks, from time to time, as may prove of practical service to the young and inexperienced horseman. At first sight of a horse, a *judge* takes a general survey of him, and if he observe any apparent disproportion or deformity, his attention is at once fixed to that particular point.—Every horse, for example, that is tolerably well formed, should exhibit due proportions of limb and carcass; in fact, nine out of ten have as much carcass as is equal to the area of the space occupied by the legs in ordinary standing; but should his legs be extraordinarily long, or his carcass disproportionately small, he is said to have *too much day-light under him*, and that is certainly no mean objection. Should his head be very large, his neck of disproportionate length, his fore legs *stand under him*, or his quarters be *ragged* and ugly, such glaring imperfections cannot fail to attract our notice as soon as, or even before, the groom *has set him on his legs.* But we shall have occasion to particularise these things in a detail of the perfections and imperfections of the different parts entering into the composition of the animal.

The exterior of the horse may be divided, for the convenience of thus describing his several parts, into head, neck, body, and legs: first, we shall delineate a good head. The *nob* should be small. A large head is not only a *plain* head, but a bad point, inasmuch as it really, under certain circumstances, detracts from the powers of the horse; he has, in fact, more to carry,—it is a burden to him, and the only way in which he can possibly carry it to advantage, is at the extremity of a short and upright neck. Like the weight of a pair of steelyards, if it is supported by a long and horizontal neck, its burden becomes enormously augmented, so that the weight transmitted to the fore extremities (for those parts support the head and neck as well as half the carcass) is much increased, and, from the natural preponderance of it before, is very likely to prove the cause of the horse's *falling down*, more especially if the rider is heavy, every trip or miss-step he may chance to make. In addition to all this, a *lawyer* (or big-headed horse) is apt to have a *hard mouth,* or rather, we say, *no mouth,* so that we are always apprehensive of his being *heavy in hand,* and *unpleasant to ride.* It is proper, however, to state, before we proceed further, lest we incur censure for these remarks, that the formation of the neck, and *the mode in which the head is set on*, and *how he carries it*, will have much to do with the head being objectionable from its size, and with his being light or heavy in hand; for we have known many *big-headed horses ride well,* and be as *safe* and as *light in hand* as any others. Next to size, its shape becomes a consideration: every *feature* should give animation to the countenance; let the forehead be *broad* and *flat;* the eye *staring*, and *full of fire;* the ears *thin, fine,* and *often erect;* the nostrils, *circular, dilated*, and *reddened within;* the lips, *soft, thin,* and *hairless;* the jowl *extended,* and the cheeks *well marked.*

> "Fire from his eyes, clouds from his nostrils, flow."

This, at least, is what we would have it in the thorough bred, and as a general rule, the nearer that of any other description of horse approaches to it, the better the *family he springs from*, and the more sanguine we may be in our prognostic of his abilities. That such a horse *looks like a sticker,* or is a *perfect gentleman about his nob*, are no uncommon nor very unmeaning expressions in the mouths of *sportsmen* and *copers.* But his head may be very long, or it may be very short, though we do not know that either is particularly objectionable, except as an eye sore, if the countenance is something like what we have just described; unless he be a *Yorkshireman*, and then, certainly, we should not fall in love with such a big *canister.* The *race* ought to be perfectly straight, (see plate,) and the *muzzle*, in the *blood horse, square*, and such as will *go into a pint pot;* a *Roman nose* (one in which the race is curved) is by no means desirable, though his *napper* be but of ordinary dimensions; it is seen, more commonly, however, in a big head, which it, in a side view, makes appear not only much larger, but exceedingly ugly: this may be said to constitute a *plain Yorkshire head.* Withal, the head, to render it handsome, should be *well set on;* its junction with the neck should form a *sort of curve,* so as to leave ample space in the throat for a large and prominent *gullet*, by which we may judge him to be a *good-winded horse.*

The neck now demands our attention; if good, the *crest* will form an arch of agreeable curve from the *poll* to the *withers,*

> "With neck like a rainbow, erecting his crest."

It will be of proportionate length, and progressive increase in breadth, as it approaches the chest. A *long* neck, if it be *straight*, or but *little curved*, is objectionable, for reasons we stated when speaking of a large head; a *short* one, however excellent it may be on the principle of the steelyards, is never *handsome*, and seldom exists without rendering even a good hackney *piggish.* That *short necked* horses are better winded than others, because the air has less distance to pass to and from the lungs, is an opinion to which we cannot subscribe. The neck should also be *thin*, not *thick* and *heavy*, and *rounded* and *straight along its lower margin;* should the *canal* of the *jugular vein* be *deep*, and the windpipe *full* and *prominent* below it, we may regard it as a sign of *good wind.* When the arch of it is reversed, *i. e.* below instead of above, and the crest, or what ought to be the crest, near the withers, is hollow and sunken, the horse is said to have an *ewe-neck*, one of the greatest natural deformities common to these parts. Under these circumstances it is usual for a *dealer* to say, that the neck is put on the wrong side upwards; but, in reality, it appears to arise from the junction of it with the chest being too low down.

Of all the points of a horse, the shoulder, for a hackney, or a hunter, is of the utmost consequence; without a *good* shoulder, no horse *can ride well:* he may be a good *harness horse*, or he may *race* well; but it is physically impossible for him to carry his rider with ease and pleasure on the road: these are no speculative opinions, but facts, grounded on the experience of all men who *know a horse when they see one*, and the result of our own every-day observations; so much does the action of the fore extremities depend on the structure of this part. And now, what is it that constitutes a *good* shoulder, and how are we to know a *good* from a *bad* one? In order to render our answers to these questions intelligible, it will be necessary for us to deviate a little, and say something on the *internal* mechanism of the part.—The *scapulæ*, or shoulder blades, are attached to the ribs by many powerful muscles, which move them, during the action of the animal, round their own axis, or, at least, in a very similar way; and though they can only revolve through the small segment of a circle, that segment is greater in proportion as they are more obliquely placed against the sides of the chest; hence it will be seen, that what is called an oblique shoulder is most advantageous for motion. Again, the *best shouldered* horses have, generally, THIN withers; but this is not indispensably necessary to the formation of a good shoulder, for we know some, and *good judges*, who are of a contrary opinion: we must confess, however, for our own part, that we prefer *fine* withers. The *thickness* of the withers will depend on the conformation of the chest and the obliquity of the *scapulæ*, and not so much as some persons, high in veterinary repute, have supposed, on the length of the *dorsal spines.** Now, if, in viewing the fore parts of a horse, we find he rises upon the withers, (and we must take care that this be not an illusion, produced by placing his fore legs upon rising ground,) and that no *traces* of his blade-bone can be seen under the skin, but all appears *smooth* and *level*, we may conclude that the shoulder is *oblique;* though a more direct proof is furnished us by carrying the eye from the summit of the withers to the extremity of the *point of the shoulders.* If it is upright, or nearly so, unless it be in a thorough-bred horse, (such a shoulder is only *fit for the collar*,) we shall perceive an irregularity under the skin, just below the withers, by passing our hand over the part; and find, on grasping the part, that it is *thick* and *clumsy*, because we are actually at the time grasping the *blade-bone* as well as *wither-bone;* though (as before observed) these may be *thick* from the construction of the chest.

A *lean* shoulder is one having *thin* withers, covered with *fine* and *genuine muscle;* a *loaded*, or *overloaded* shoulder, one with *thick* withers, clothed with *course* and *flabby* muscles; and the *thickness* of the wither, as was said before, depends on the obliquity of the *shoulder-blades,* and the proximity of their superior borders to the *dorsal spines.* That horses have been fast runners on the turf with *bad* shoulders, is no proof that they would not have galloped better and quicker with *good* ones; and, we must recollect, that, in a racer, the *hind quarters* are of primary importance, the *fore quarters* only of secondary consideration: but, on the road, we know that *bad-shouldered* horses are never *pleasant* nor *safe* hackneys; they *step short*, are *puddling walkers, roll about* in their *trot*, and are exceeding likely to *go to prayers.*

The *fore-leg* should descend in a straight line from the bottom of the shoulder, *i. e.* in a lateral view; but when seen in front, it ought to incline gently inwards: if the elbow projects directly backwards, and the toe points with precision forwards, we may rest satisfied that the horse is not *twisted in his fore legs.* Turning the toe *in* or *out* in standing is apt to be accompanied with distortion, or deformity of the limb; this circumstance, therefore, is seldom seen without materially lessening the value of an animal: of the two faults, turning them *out* is the greater, for the pointing *inwards* is seldom carried to the extreme. A *good* arm is *broad* and *thick, long*, when compared to the leg, and marked exteriorly by *muscular prominences;* the elbow cannot *project too far back*, and the *plumper* the *muscle* is immediately above it, the greater we may conclude to be the animal's powers.

The *knees* ought to be *large, broad* in *front*, and distinctly marked with several *bony knobs; lateral thickness* is, also, of much importance. When the *radius*, (the bone of the arm,) instead of descending in a straight line, is directed backwards, so that the knee appears to recede from it, the horse is said to be *calf-kneed*, a term that well conveys the idea we have of this formation: it is always objectionable for the *saddle*, but not for the *collar.* The leg should fall in exactly perpendicular from the carcass, and be *short* when compared with the arm, the converse of this being indicative of weakness; and of sufficient *breadth* to enable a purchaser, even at a distance, to distinguish the *tendons* and *bone*, with perfect clearness, in their relative situations; for, if he cannot do this, there is reason for suspecting that he is *gummy*, the effect of hard work or premature use, and never a *natural defect.* Should the legs be *round* and *straight* below, they are called *stilty*, and are never *firm* and *good.* But the best and only correct way to judge of legs, is to pass *the hand down them;* if they measure much round, and the sinews feel firm, hard, and distinct, like well-braced cords, and if the intervening spaces between bone and sinew be *clean,—free from gum,* we may pronounce that they are *good.*

The *fetlock*, as a joint, should be of large dimensions, proportionate with other parts; no joint, in fact, is too large, providing its *bony prominences* be distinctly seen with the naked eye, and its *ligaments* perceptible under our fingers. I need not, therefore, further enforce this truth in speaking of these organs. *Knuckling over* in the fetlocks is a sign of original mal-formation, such as *uprightness* in the pasterns, or else is the result of hard work; and the tottering affection of the limb, accompanying this state, is caused by local debility and excessive irritability in the nervous system. The pasterns always deserve much of our attention; when *good*, their *length* is proportionate with that of other parts, and they incline, with *much obliquity*, downwards and forwards to the foot: should they approach the *perpendicular,* they are almost always short, and are said to be *straight* or *upright;* but when they approximate to the *horizontal*, they are long, and called, though erroneously, *oblique;* for they are not so obliquely placed, under these circumstances, with regard to the leg, as they are when properly constructed. Perhaps, no part of the horse exhibits the wisdom of nature more, in regard to the adaptation of it, in point of structure, to the purpose for which the animal was designed, than this: in the racer, for example, the pasterns are *lengthy,* and incline to right angles with the legs, whereby more weight is imposed upon the hinder parts of the fetlock and hoof, in which situations are placed *pieces of mechanism,* which, by their elasticity, serve as so many springs in diminishing the effects of concussion so requisite in this animal, which was intended to perform *swift* and *sudden* movements: but in the cart-horse, whose action is *slow* and *powerful,* the pasterns are *short* and *nearly upright*, so that most of the weight is thrown upon the main bones of the foot, and thereby his springs, which have less play than those of the Arabian or thorough-bred, are not so much acted upon; consequently less provision is made against concussion, for strength, and not elasticity, is sought for in the construction of this powerful animal. Horses with very oblique pasterns are more likely to *break down*, and, for this reason, they ought never to be shod with thin-heeled shoes; on the other hand, if they are very short and upright in these joints, they are seldom or ever sure-footed, and will soon become *stilty* and *groggy* from work.

The *hoof* next engages our notice, and this is a part of which we should be more than commonly scrupulous and nice in our inspection: "*No foot, no horse*," is a trite but very true adage, and one that is not kept sufficiently in view by the purchasers of horses, or they would not have so frequently to *lament their hard fate* in having *gone to market for a screw.* First, we should look to the size of the hoof; a *small* foot is not only objectionable in itself, even though it be a natural formation, but is often a characteristic of disease; but a *small* and *upright* foot is a morbid structure, and is scarcely ever seen in any one but a *dancing-master*, or light-timbered tit.—White hoofs are to be eyed with suspicion; they are really weaker, and more liable to disease, than dark or black ones; and if a horse has one white and the other dark-coloured, and he is lame, in nine cases out of ten, it is the white foot that is affected. So much with regard to the exterior of the foot before it is *taken up.* Other considerations now engross our attention. Is it contracted? *i. e.* is its circularity destroyed by narrowness at the heels? A *good* hoof is *circular* in the tread, or nearly so, measuring as much from side to side as from toe to heel; but we frequently find those that are morbid measuring as much from toe to heel as twice the lateral diameter. On the other hand, the *wall* of the *hoof*, which should, at all times, be perfectly *smooth* and free from ridges, (the contrary indicating disease,) may be very *oblique*, in which case, it is not only *circular*, but *spreads out*, even to a morbid degree, in the tread. Large heavy horses, such as are bred in low marshy situations, are most subject to have this kind of foot, in which parts of the country, it is preferred by many people, who contend that their hunters derive advantages from it. As the *strong* and *upright* foot is likely to become *contracted*, so is this subject to a disease called *fleshy soles;* indeed, in the former, the sole is concave; but in the latter, it is flat, on which account the two require different modes of shoeing.

The *body, or carcass,* may be subdivided into the chest, belly and loins. So far as regards the *constitution* of the horse, his *stamina,* or his *bottom*, no part is of more consequence than the chest; but, like that of many other parts, no particular construction of it is the best for all kinds of horses. That of the cart-horse should be *circular, broad in the bosom*, and *large in the girth;* that of the thorough-bred, more circumscribed, but not *flat-sided*, very *deep*, and, also, extensive in the girth: so that the two differ more in *width* than in *depth*. Had the racer possessed a broad circular chest, his shoulders must have been thick, and his fore legs far apart, and no horse so made can gallop well or fast, though many such are ridden as hackneys, they are apt to have a rolling gait, and an awkward mode of going altogether, perceptible, at all times, to the *connoisseur in horse-flesh;* but we must be careful, even in choosing racers, not to run into the other extreme; for, if *both legs come out of one hole*, or he be *flat-sided*, he cannot endure much fatigue, is very probably a *bad feeder*, and certainly predisposed to disease of the chest. A *full* and *prominent* bosom is a fine point; and the ribs should *stand out* with sufficient curve to afford space enough within: for which reason, some, as we before remarked, prefer a *thickish shoulder*, if it be an oblique one; and another advantage accompanying such conformation is, that *we have something between our legs* when mounted, a property, certainly, that every horse ought to possess. As to the belly, its shape will depend much on that of the chest and loins. A *narrow-carcassed* horse can never *do much work,* readily loses his condition, and with difficulty recovers it, being, very commonly, but a *queer feeder*. We should have *something to kick against*, and unless he *carries his dinner with him*, his *bread-basket* cannot be said to be of the best description.

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*Bones of the withers. It is contended, on another side, that the *situation* of the scapulæ has nothing to do with the *thickness* of the shoulder, but that it is wholly owing to the *length of the spinous processes of the dorsal vertebræ.* To establish this opinion must be proved two data, viz. 1st, that these spines are short, or comparatively so, in all *thick-shouldered horses,* and long in *thin-shouldered* ones; and, 2dly, that the converse of this *never* happens. To *one who has dissected shoulders,* these are certainly *home-thrusts*; such, at least, as we could not parry: though we know that the dimensions of these bones may and do, like those of most others, vary in different horses. But they also vary in their degrees of inclination; and may not this circumstance alone, in some measure, affect the construction of it? At all events, we know these facts, dray or cart horses have *wide chests* and *thick shoulders;* others, with *wide chests* have *thick shoulders*, but with *narrow chests thin*, unless the *scapulæ* be *upright.* Now, if they who differ with us, mean to assert that all this arises *solely* from the length of the *dorsal spines*, we can only say, *credat judæus appella.*

The *back* should be perfectly *straight;* a *hollow* back is a sign of want of strength; but it is often extremely pleasant to the rider: a *roach-back*, the reverse of a hollow back, is by no means handsome, though some argue that horses having such are stronger: one objection to it is, that it is apt to chafe from the saddle. The loins are a point that we should always be nice about. A *hollow* back and a *narrow* loin are generally indicative of natural weakness; but the latter is far more exceptionable than the former: a horse so formed can seldom carry much weight, soon knocks up, and often proves a bad feeder: his constant *hollowness* in the flank, and his *lank* appearance altogether, after a day's hunting, demonstrate how incapable he is of bearing the exertions required of him.

The *tail*, in regard to the manner in which it is *set on*, is not to be overlooked: a horse that carries *two good ends*, (of which the head forms one, and the tail the other,) always *looks grand,—is a perfect gentleman in his appearance.* Above all others, the charger should possess this point in perfection, to coincide with the *grandeur of his carriage* in the ostentations parade of a field-day. *Hinc bellator equus campo sese arduus infert.* The tail, in most horses, should form, when elevated, a straight line, or nearly so, with the back: a gentle declivity of the *croup*, however, from the summit of the rump, denotes the *blood-like quarter*, and adds much grace to this part in the thorough-bred: should this line decline very much, the horse is said to be *droop-arsed*, and the quarters lose much of their beauty as well as their natural power. Nothing is so ugly, in a *full quartered horse*, as to see the tail, set on low down, issuing abruptly from the rump as if a *broomstick had been stuck in the place.* The dealers, who indiscriminately fig all, often *spoil the sale* of a horse of this description by *curling the tail upwards with a dose of ginger.* Some horses *carry a good tail naturally,*—others by means of art, having undergone the operation called *nicking*. *Gingery* or *peppery* hackneys seldom require *nicking;* indeed, hackneys are often called, from this circumstance, *cock-tails,* in contradistinction to *thorough-breds*, who seldom, or never, carry any but a *drooping tail*, better known by the name of *blood-tail;* a *cocked-tail* would be incompatible with a *blood-quarter;* hence it is that blood-horses should *never be figged*, or *nicked*.

The *quarters* may be *full, small*, or *fine and blood-like.* *Full quarters* are such as are possessed by cart-horses, large machine-horses, and hackneys able to carry great weight. These horses are wide in the hips, though their hips are but indistinctly marked, in consequence of being enveloped by large, coarse, flabby muscles. People are too apt to regard *wide hips* as an objectionable point, from their giving to the horse that appearance called *ragged hips*, which, indeed, are not only ugly, but denote bad conformation, though, of themselves, they denote good make; for the fact is, that *ragged hips* are produced by a *bad* loin, and a *lank, flat*, and *weak* quarter. Were these parts well formed, we should pronounce the hips to be of the best description. The *small* quarter is one that is often seen in a horse of this form: though the general coutour of it may be *regular* and *uniform*, it is altogether *disproportionately small* when compared with the carcass: if it grows narrow towards the hinder part, the animal is often said to be *goose-rumped.* But, of all other structures, the *blood-like* quarter is the best adapted for speed: in it, the tail is *set on high up*, and the hips are high and prominent, but not *ragged;* so that many of our best racers are *higher behind than before*, the *spaces* between them and the points of the quarters *great*, as are also those between the latter parts and the stifles; the haunches want the *plumpness* and *roundness* of the *full* quarter; but, so far from being either *lank* or *thin,* are *striped with bold and prominent muscles*, which, being free from the *adipose* and *cellular substance* that constitutes the *flabbiness* of those of the *full* quarter, are so distinct, even through the skin, that we can distinguish where one ends and another begins. The stifles should *project boldly forwards*, and have a perceptible *irregularity* of surface. The thighs are *good*, when *long, thick* and *muscular;* the little *hillocks,* or *rotundities,* upon them, mark the course of *muscles*, and always denote great power; the nearer the angles which they form with the parts above and below approach to *right angles,* the more force the *muscles* can exert; *ergo*, the more powerful the horse. The hock, of all other parts, is in the racer of the utmost importance; it should be *broad, flat*, and of *large dimensions.* The propulsion of the machine is effected chiefly by those *muscles* that are attached to the point of the hock; so that the more *projecting* this is, the greater the force they can exert, simply on the principle of the lever: as a man with a long oar can row with more facility and effect than he who uses the short one, or *scull,* so can a horse with broad projecting hocks *get over the ground* with comparative ease to himself, and pleasure to his rider. The advantages the *half-bred* horse with *good* hocks possesses as a hunter, are of no less moment than those a *good* hock confers upon the racer: his great propelling powers will enable him to *clear his raspers*[*] with so much *grace* that the rider will find it a *difficult matter* to *pound him,*[†] and empowers him to *make such play* in the mud as will soon *sew up* his *lank-thighed* and *straight-hocked* competitors. The point of the hock cannot *stand out* too much; indeed, the greater its dimensions, altogether, the better, provided it be not *gummy*, or that its various *bony projections* and *sinewy parts* be distinctly seen or felt. If the hock is narrow, its point round, and not well defined, it is said to be *straight*, and, from being very liable to *curbs*, is often called a *curby-hock:* should its point be directed inwards, and the toes turned outwards, the horse is *cow-hocked*, or *cat-hammed.* As this is a part very liable to defect, as well as to original malformation, the nicest examination is required to detect all that may prove disadvantageous or injurious to its function, the proper performance of which is of so much importance, that the propulsion of the whole machine depends chiefly upon it.

REMARKS ON THE PURCHASE OF A HORSE.

Having selected a horse whose *make and shape* please us, our next consideration is his soundness; for, though the horse-dealer may declare that he is as *sound as a bell*, we are to take the phrase as one having various meanings, and not be deterred from examining him, and narrowly too, on that account. *Sight, wind*, and *limb*, must be the uppermost objects of inquiry; for nine hundred horses out of a thousand are defective in one of these particulars. First, then, examine his eyes, and do this before he comes out of the stable. Having placed him so that the light may fall upon the eyes but in one direction, see that they are of the same size, and equally full; that the haws are not prominent, and that one does not project more than the other; that the eyes are perfectly clear and transparent; and that the pupils, or *apples of the eyes,* are exactly alike in size as well as colour. A sunken eye, or one over which the lids are partly closed,—a projecting haw,—an opaque, or semi-opaque, front,[*]—a pupil dilated, or a white or clouded one,—are so many omens of disease, for which we should reject the *prad* as a *cupid,*[†] or, what is often worse, a *blinker;* who will shy at all he meets with, and break your neck the first *poser*[‡] you ride him at. Having satisfied yourself in regard to his *peepers*, have him *pulled out,* and next proceed to examine his *pipes*. If *good* and *sound,* on being nipped in the gullet, he will utter such a sound as cannot fail to strike the ear as the emission of a good *pair of bellows;* but if his *lungs are touched*, and he is a *piper*, (that is, *broken-winded,* or *having no wind at all,*) he will give vent to a *dry husky, short,* cough. Should a horse be suspected of *bad wind*, however, the purchaser cannot do better than direct his attention to the flanks, which, under such circumstances, will work either much quicker than ordinarily, or heave deeply, and with great irregularity; they will be considerably longer in contracting themselves, in order to squeeze the wind out[‖], than in falling to let it in,[§] which they do, if he is a *piper*, quite suddenly. But, though not a *piper*, he may be a *whistler,* or, what is worse, a *roarer:* the first may be known by the peculiar *wheezing* he is addicted to when put to sudden or long continued exertion; the latter, by *blowing his horn* clamorously under similar circumstances; and either may be made to display itself, by the purchaser giving him a smart cut, or even feigning to to do so, with his *bit of ash*.

Thirdly, and lastly, as to the limbs. If, in passing our hand down his legs, we find any unnatural protuberance, or puffiness, or if, in feeling first one leg and then the other, we discover any difference between them, disease more or less is present: he may not be *lame*, but he is not *clean upon his legs. Splents, windgalls*, and *ringbones*, may be present without occasioning lameness, but they are all unnatural, are considered *blemishes,* and are all to be regarded with a suspicious eye, as either denoting past *hard work,* or betokening future evils. On the same principle, a horse may have a *spavin,* and be *only stiff* from it at *starting*, or he may have a *curb*, or a *thorough-pin,* and be *perfectly sound;* but these are still *blemishes*, and as such detract from the intrinsic value of the animal. In explaining the advantages resulting from *good* conformation, we are *naturally* led to make remarks *en passant,* on the disadvantages from *bad;* in pursuance whereof, I have shown *why* such a structure *is bad*, a question that *necessarily* entails upon us the mention of the *disorders originating therein,* i. e. the diseases to which such parts, in consequence of being *mal-formed,* are *predisposed.*

INOPES.

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[*] *Rasper*, a high and dangerous leap.

[†] Surrounded by *inaccessible raspers*.

[*] Transparent cornea.

[†] A blind one.

[‡] So called from *planting* all but the *nonpareils*.

[‖] Expiration.

[§] Inspiration.

AGRICULTURE.

EXTRACTS FROM AGRICULTURAL ADDRESSES,

Extract from an address delivered before the Philadelphia Society for Promoting Agriculture, at its annual meeting, on the 18th January, 1825, by

ROBERTS VAUX.

Introduction of Gypsum and Red Clover, and their important bearing on the agricultural prosperity of modern Pennsylvania.

The use of lime and gypsum, as fertilizers of the ground, the introduction of clover, and the rotation of crops, constitute the happy causes which gave the first grand impulse to the agricultural prosperity of modern Pennsylvania.

Nothing, perhaps, requires more perseverance than the effort to overcome the injudicious habits of men in connexion with the chief secular pursuit of their lives. This remark has heretofore applied with peculiar force to the husbandmen of Pennsylvania, and the individual who here entered the lists in this fearful conflict with prejudice, must be allowed to have possessed no inconsiderable share of moral courage, united with comprehensive patriotism and benevolence.

The merit of introducing gypsum to the notice of the farmers of the United States, belongs, with various other important suggestions, to my venerable friend, who has so long, so disinterestedly, and so ably presided over this institution;—a gentleman whose distinguished services need not my voice to enlarge the plenteous reward of gratitude and respect which crown the evening of his useful day. He well knows that I would not offend him by adulation; but as an inducement to every mind desirous to put forth its energies in the good work in which he has ever taken the deepest interest, I feel bound to exhibit the surprising results which well directed and untiring efforts may accomplish. Like the early patron of husbandry and rural affairs in England, our Fitzherbert found leisure amidst the duties of a profession which gave him eminence at the bar, and subsequently distinction on the bench, to make and to give to the public his judicious experiments in agriculture.

In the year 1770, he first became acquainted with gypsum. A small quantity of which was then sent from Germany to a merchant of this city, with some information of its value as a manure, then but recently and accidentally discovered. It was said concerning it, that a labourer who had been employed in mixing stucco mortar, passed and repassed from his work to his cottage, across a sterile field. The succeeding season his path threw up a luxuriant crop of grass, which he attributed to the plaister that fell from his clothes, and was thus induced to make an experiment near his dwelling, with the remainder of the article in his possession. The effects astonished every beholder, and the cottager received a reward from his landlord for divulging the secret. Our president, aware of these facts, began his experiments with a single bushel of gypsum, obtained from a maker of stucco ornaments in Philadelphia, and afterwards pursued and extended them in proportion to his means. Not long after, about twenty tons of this valuable material came as ballast in a ship from London to this port, without the least knowledge of its worth by the captain who brought it, which stock formed the foundation of the vast improvements to our husbandry, subsequently resulting from its general use. Having altogether satisfied himself of the fertilizing effects of plaister of Paris, Judge Peters disseminated the knowledge he had acquired through many parts of Pennsylvania, and the then neighbouring provinces: but his success in persuading his countrymen to credit his assertions, and in inducin others to make trial of the sulphate of lime, was at first limited and very discouraging. He nevertheless continued his labours, and by publishing and otherwise enforcing the facts he possessed on this subject, had the happiness to witness the triumph of his doctrines, over the combined forces of ignorance, prejudice, and ridicule. What have been the consequences flowing from the use of this fertilizing principle, and how much it has contributed to the solid wealth of Pennsylvania, and of many other states in this union, is far beyond the reach of computation. The history of human concerns will furnish few such instances as the one we are now contemplating. That an individual should begin a system intended to revive an exhausted soil, by the application of a manure which at the time was not known to exist on this continent, the theatre of his experiments; that he should succeed in establishing the principle for which he contended; that he should afterwards set on foot the inquiry, where this wonderful agent could be found, so as to place it within the reach of the American Farmer, at a price which he could afford to give for it; that gypsum should be discovered in exhaustless quantities in this hemisphere, that thousands of tons of it should be annually brought, and spread over hundreds of thousands of acres in Pennsylvania, restoring the land, and bringing forth abundance, are the astonishing results, and the high reward which this constant friend to the interests and prosperity of our husbandmen, has lived to know and to enjoy. Whilst our president was thus earnestly engaged in bestowing incalculable benefits on our state and country, he was by no means unmindful of other interesting and important improvements in rural economy. His ancient patrimonial estates in the vicinity of Philadelphia, then under his immediate direction, furnished practical evidence of the sincerity and utility of his doctrines concerning agriculture. It was upon those farms that the first examples were shown of the use of lime and gypsum, of the value of several new grasses, of trench and fall ploughing, of deep culture, &c. and there also were cultivated upon a large scale, many of the roots since generally and profitably adopted. Upon his inclosures were to be seen some of the finest breeds of horses, cattle and sheep, then known in the state. I have heard him say with what mortification he beheld, during the revolutionary war, eleven out of fourteen superior blooded colts shot down for their hides, by a party of British marauders, after in vain attempting to rescue them from such wanton destruction.

His household, too, was a pattern for the imitation of farmers in the manufacture of linen and woollen fabrics, far beyond the demand for domestic purposes; displaying an attention to a branch of business, now too much neglected by the generality of our rural fellow citizens, at an expense, I fear, of habits of simplicity, which were proverbial in former days.

About the time that gypsum was first brought, a small quantity of red clover seed also reached Pennsylvania, and was sown in gardens, and on pasture lots in the neighbourhood of this city. In the year 1773, a practical farmer,* then beginning to improve his estate at Flatland Ford, in the county of Montgomery, unable to procure, on this side of the Atlantic, a sufficient quantity of this seed for his purpose, obtained from England a cask of it, which, owing to some injury sustained on the voyage, was found unfit for use. This disappointment was the more to be lamented, because his projected experiment would have been the first in that vicinity, perhaps in the state, with clover upon a large scale. This failure, moreover, prevented an increase and distribution of the seed until after the war then existing between the American colonies and the mother country. The same gentleman who thus early desired to cultivate that artificial grass, in the spring of 1785, sowed eighty pounds of clover seed on thirty-five acres of green wheat, an account of the success of which he sent to this society in 1787. In the same communication he submits the following views for the improvement of farming. "Breaking up land is perfectly understood by all our farmers, I may say to an extreme degree, which ought to be counteracted by obtaining the art of laying down land with artificial grass seed, otherwise the arable land in the old counties of Pennsylvania will in a very few years become of little value. Laying down lands properly being an object of importance on the great scale of agriculture, it is incumbent upon you to impress the necessity there is, that this art should not only be understood, but practised, by all farmers, rich or poor, let their soil be clay, loam, or any mixture whatever. The earth, like the animal body, is capable of supporting a certain degree of labour, and like it, requires proportionable nutriment, rest, and cleanliness; but withhold from the land those necessary reliefs, and like a starved, over-worked, and neglected slave, it will be worn out, and instead of making profit to the owner and benefit to the state, it will impoverish the one, and disgrace the other." He then proceeds to recommend that the legislature should allow a bounty on clover seed, and adds, "I leave the society to press this measure, for it is deserving of its notice, and the full countenance of every legislator: I will boldly assert, it will prove of more benefit to agriculture and stock in the present state of our country, than any thing that can be done. Reduce the price of clover seed, and instead of bare fields, daily washing away, you will see them covered with grass and cattle."* Sentiments, such as these, were no doubt regarded as visionary and extravagant by the great majority of farmers at that time on the active stage of life, yet this practical instructor has lived to witness the accuracy of his opinions, and the fulfilment of his prediction, to an extent far beyond what he may have anticipated.

(*Further extracts in our next.*)

PROCEEDINGS OF AGRICULTURAL SOCIETIES.

Philadelphia Society for Promoting Agriculture.

Stated meeting, March 15, 1825—Dr. Mease, Vice President, in the chair; the following communications were read:—

1. The answer of Gen. Lafayette to the address of the Society, presented to him by Mr. Breck, representative in Congress from Philadelphia county, and a member of the Society, with his certificate of honorary membership of the Society.

2. A letter to the Chairman from Benjamin Harrison, of Berkeley, Charles-City county, Virginia, dated Jan. 21, 1825, in reply to a letter addressed to him, respecting the cure which it was understood he had effected of that fatal disease, the *Bloody Murrain* in cattle, by a drench of the infusion of cedar berries. The medicine was used upon the suggestion of Mr. Jones, of Gloucester, Virginia. A quart of the infusion, containing about half a pint of the berries, was given at a time; and in nearly every case, the good effects were almost instantaneous; a considerable discharge from the bladder and bowels followed, and in five or ten minutes time, the animal began to eat. In nineteen cases out of twenty, a perfect cure was effected. In many cases the drench was repeated four or five times. So rapid was the progress of the disease, that cattle were

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* James Vaux.

* Ten thousand bushels of clover seed have, within a few months past, been exported from Philadelphia to Europe, chiefly to England.

found dead in the fields without the owners having any apprehensions of their being sick. As a preventive, Mr. William Minge, of James River, informed Mr. Harrison of the use of a mixture of clay, salt, (in the common proportion for stock,) tar and powdered brimstone. For fifty head, one gallon of tar, and half a pound of brimstone, per week, were employed. These ingredients were put in a trough to which the cattle had free access. The disease it appears is *endemic*,[*] in Virginia, particularly in the districts bordering on tide water, and is highly contagious. The farmers of the United States will have good reason to thank Mr. Harrison for the communication of an effectual cure for a disease which has destroyed thousands of cattle in the United States. In 1819 it prevailed with great mortality in Chester county. Some papers on the subject will appear in the fifth volume of Memoirs of the Society, now in press by Abm. Small.

3. A letter to the Chairman from Dr. Kercheval, of Bardstown, Kentucky, in reply to one requesting some explanation and further account of a fatal disease that prevailed among horses and horned cattle in that vicinity, and described by Dr. Kercheval in "the Medical Recorder of Philadelphia," vol. 4. p. 445.—The external symptom of the disease, was a swelling, sometimes originating in the throat, but generally at the breast, extending along the sides to the flanks, and uniting across the loins.—These swellings were soft and elastic, and after death were found to contain grumous blood, and coagulated lymph. The blood was in some instances so dissolved as to transude the skin. The progress of the disease was very rapid. Cattle brought to the fold in the morning apparently well, died before noon: and many that were feeding in the evening, were found dead in the morning. A serious peculiarity of the disease was, the communication of the virus or morbid matter generated in the body of the animal to those persons who flayed the animals that had died of it. From a small and circumscribed vesicle, containing a dark and turbid fluid, a malignant and destroying ulcer was formed, which ended in a mortification of the part, and was accompanied by chills and fever, severe pains in the joints, and along the course of the spine, and prostration of the vital powers. Delirium and death followed. No remedy is mentioned for the disease in the brute animal. In the human subject, stimulating applications, consisting of carbonate of potash, and solutions of sal ammoniac in vinegar, to the parts affected, after removing the dead flesh, and bark internally, were successfully applied and given.

4. A paper on the hoof disease of horned cattle, by the Chairman. This disease was shown by facts communicated by the late Joseph Cooper, of N. Jersey, by William Rush, an extensive grazier, late of Philadelphia, and others, to proceed from the use, by the stock, of hay made of the *poa viridis*, green or spear grass, growing on meadows which were deprived of their accustomed supply of water, in consequence of which the seeds of the grass became affected with ergot, similar to that which appears in rye. The disease appeared to great extent in Orange county, New York, in the years 1818 and 1820, and has been described by Dr. Arnell, of that county. Dr. A. mentions the prevalence of the disease, also, in Blooming Grove, New York; the very place in which Mr. Rush had seen the disease during the *very dry summer* of the year 1795. The grass was the produce of *bog meadow soil*. The same effects followed the use of the diseased hay by the cattle, as were observed to take place in France in persons who ate bread made from the flour of rye, which was affected with ergot [for particulars, see 3d vol. of Memoirs of the Philadelphia Ag. Soc.] viz. The loss of hoofs in cattle, and mortification of the feet in the human subject. The remedies which Dr. Arnell found effectual, were stimulating applications to the feet, such as, 1st, poultices of soap, rye flour, and salt; 2d, a wash of beef brine, applied several times a day, and rubbing the feet with an ointment made of the plant *bitter-sweet*. These applications enabled the part to throw off the disease. Of the cattle thus treated, only one lost its hoofs. An obvious preventive is to avoid the use of hay affected with ergot. Early cutting of the grass should be attended to.

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[*] Endemic diseases are those that exist in a country from causes connected with it, as the fever and ague in marshy districts.

REPORT OF THE SEASON

AT STEPHENSTOWN, RENSELLAER COUNTY, N. YORK.

March 25, 1825.

To the Editor,

I take the liberty of sending you the following memoranda of things that have taken place and been seen in this quarter of the country the present season. The reason of my sending it for insertion in your paper is, that a comparison of seasons is useful to the agriculturist, and a further inducement is, that I hope your paper may outlive the fleeting memory of the present age, and at a future day a comparison may take place, and we shall then know if similar occurrences happen.

The spring in this quarter is remarkably open, indeed there has been no winter. "On the 12th of March, 1825. blue jays, chippen birds, blue birds, robbins, sparrows, meadow larks, and now and then a swallow were seen; in fact, all the feathered songsters" had made their appearance as is usual at a much later period of the season; in the same week, numberless grasshoppers were seen in droves, as in autumn; the striped snakes were crawling as usual, and the frogs, as in warm weather, were peeping in every direction; the farmers were ploughing fields and repairing their fences, and even the night bird who screeches to us in May, is now amongst us high in the air at evening.

I have conversed with one of the oldest of the inhabitants of the town, and also one amongst the first settlers, he is a person of observation and good mental faculties, he tells me he never knew such a winter and spring in his life; persons of a younger age, but of experience, say the same; in fact, the frost has left the ground, and the roads settled as hard as they would be several weeks later in common seasons. It is to be borne in mind that this is in the interior, and far from the seaboard.

One thing more—As I profess to have a genuine knowledge of fruit trees, got by practical experience and some considerable reading, I have been throwing my ideas together, to send you for publication.

Yours, &c.

E. F. B.

IMPROVEMENT OF WOOL.

A PLAN of an association has been formed, to be called "THE NEW ENGLAND SOCIETY FOR THE IMPROVEMENT OF WOOL," the constitution of which already bears the signatures of

John Quincy Adams, Samuel C. Allen, William Bainbridge, Francis Baylies, Joshua Clapp, B. W. Crowninshield, David Cummings, Samuel Dana, James H. Duncan, Henry W. Dwight, James Lloyd, E. H. Mills, Jonas Sibley, Wm. Sturges, and Daniel Webster, of *Massachusetts*.

Ichabod Bartlett, Samuel Bell, Matthew Harvey, John F. Parrott, and Thomas Whipple, jr. of *New-Hampshire*.

Wm. Burleigh, Ebenezer Herrick, John Holmes, Enoch Lincoln, and Stephen Thatcher, of *Maine*.

William C. Bradley, D. Azro. A. Buck, Samuel Crafts, Henry Olin, William A. Palmer, and Horatio Seymour, of *Vermont*.

Stephen Van Rensselaer, and Moses Hayden, of *New York*.

James De Wolf, and Job Durfee, of *Rhode Island*.

James Lanman, of *Connecticut*.

Samuel Breck, and Samuel D. Ingham, of *Pennsylvania*.

James Monroe, and James Barbour, of *Virginia*.

John C. Calhoun, of *South Carolina*.

Wm. Cranch, and Wm. Wirt, of the *District of Columbia*.

By the provisions of the constitution, the president of the society may belong to any state, the vice-presidents to be one from each of the six New England states. The seat of the society to be in Boston, with branches in the other New England capitals. First election to be in June.

The duties of the society to be—to find out the best breeds of sheep which now exist in the country, in order to ascertain the degree of perfection to which sheep have already been brought in the U. States—to procure, so far as their means may enable them, from other countries, specimens of their best breeds, in order to ascertain how far the breeds now in this country, or any breeds mixed from them, will thrive and become productive in the eastern states—to disperse the different breeds over New England, in order to ascertain what food and pasturage is best adapted to the different breeds—and, generally, by reports, essays, and otherwise, to excite a spirit for the improvement of sheep and wool in every part of the country.

Every person subscribing to the constitution "with his own proper hand," and becoming subject to assessments, to be a member. It is hoped, that to the above list, there will be large additions of our yeomanry; and we are confident much good will be the result, both to the agricultural and manufacturing interests of New England from the association.

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[There is, perhaps, no branch of agricultural resource more shamefully neglected in the middle and southern states, than their capacity to extend and improve their flocks of sheep. Whilst a Connecticut farmer will keep a flock of 300 on a farm of one third, or one half as many acres, deriving from it a net profit of $600, besides its natural increase, a Maryland farmer on 600 acres, believes that he cannot sustain fifty! Some assign one excuse, some another: some say, that every few years they are liable to be killed by dogs! Then why not discard your law makers, who are wanting in intelligence and energy to remedy the evil, by subjecting the owner of any dog that is proved to have killed a sheep, to three or four, or, if necessary, ten fold damages? Let the farmers enter into *associations* to get *good* rams in every neighbourhood, and to discard every member of the legislature who comes home from Annapolis without having done something to protect their sheep and the general interests of agriculture. Let them bring the proceedings of those who set up for law makers to the test of *practical utility*, rather than to names and shadows, without meaning or substance. Does a man offer in Maryland for the once dignified and important office of lawgiver, the question is too seldom enforced,—is he familiar with the political economy of other states? or the defects in the legislation of his own as respects all the great interests of society? does he know what agriculture suffers for the want of good laws, or how it is oppressed by bad ones? Sad, and we fear too true as is this picture, there is no hope of improvement, unless means be taken to *enlighten* the rising generations. We firmly believe that by some wholesome legislative provisions, and the donation of even $50 per annum to each county, an augmentation of the productions and moral power of the agricultural community would speedily ensue, that would repay the amount bestowed a thousand fold.—But our present purpose was to show by publishing the above, from a Boston paper, that even in Massachusetts, where wool is already an article of primary importance with farmers, and where sheep are better protected, their value (as a leading object of attention) is so well understood as to have occasioned an association of some of the most distinguished men of the nation, for the "improvement of wool." Even the President of the United States has thought it worthy of him to patronise it, while, we dare say, some village or old field politician, in Maryland, if applied to, would call it a sheepish proposition!

At the last meeting of the Board of Trustees, at Eutaw, before the above notice appeared, a committee was appointed, at the instance of J. S. Skinner, to consider and report their opinions and views on the following points:—

1. On the capabilities of this state to rear, profitably, a much greater number of sheep—what are the impediments to the augmentation of our flocks, and how can these impediments be best removed?

2. What breeds might be most advantageously reared?—And,

3. What measures, if any, can be taken by the Maryland Agricultural Society, to show the profit which might arise to the agriculturists of the state from this source, if improved to its practicable extent?]

BREED OF HORSES.

At a meeting of the Board of Trustees of the *Massachusetts Agricultural Society*, held the 22d inst. the cordial thanks of the board were voted to Admiral Sir Isaac Coffin, of the British navy, for a Stud Horse and Mare, of the Yorkshire Cleveland Bays, the most highly approved breed in England, for the coach and for the road, and which were ready to be presented by him, and to be placed at the direction of the Society in Liverpool. They are expected to arrive in this city in June, when notice will be given where they will be placed.—[*Boston paper.*

[The members of the Massachusetts Agricultural Society, who are, without any exaggeration, amongst the most substantial and enlightened citizens of this country, will know how to appreciate the value of the present above mentioned. For our own part, we cannot register it, without paying the tribute of our feeble praise to one whose munificence and honorable recollections of his *native* spot, we have so often had occasion to admire.

By Admiral Sir Isaac Coffin the state of Massachusetts has been presented, within our notice, of improved domestic animals which must have cost several thousand dollars!! The value of the melioration thus to be wrought upon their native stocks, it would be difficult to estimate. We remember, at the moment, donations by him of a stallion, of the race of the London brewer's dray horse; a bull of the improved short horns breed, and a pair of the celebrated Hereford cattle; and, now, a pair of the Yorkshire Cleveland bays, male and female—This is the stock which we have long been anxious to see introduced into Maryland. It will be remembered, that the late Rob't Patterson, seeing in England the great value of this blood, in their coach horse, bought a fine colt on the spot, for which he gave 100 guineas—that horse has since been sold into Washington county, for $1500—still we are without the *breed*, because no farmer who has the means, has had the spirit to import a mare, though there is every reason to believe that her first stone colt would more than pay all expenses.*

Whilst some of our most wealthy citizens refuse to give more than five dollars, others go as far as two dollars, and others refuse to give a single one, to promote agricultural improvements in Maryland, here we have the example of an officer in a foreign service, acting under the refined and generous impulse of attachment to his native spot, making offerings of the most substantial kind, in whatever he can understand to be most conducive to the welfare of those to whom he is bound by the ties of youthful associations—ties so universal, so congenial to all virtuous hearts, as naturally to raise the indignant question,

"Breathes there the man, with soul so dead,
Who never to himself hath said,
This is my own, my native land!
Whose heart hath ne'er within him burned.
As home his footsteps he hath turned,
From wandering on a foreign strand?
If such there breathe, go, mark him well.
For him, no Minstrel raptures swell;
High though his titles, proud his name,
Boundless his wealth, as wish can claim;
Despite those titles, power, and pelf,
The wretch concentered all in self,
Living, shall forfeit fair renown,
And, doubly dying, shall go down
To the vile dust, from whence he sprung,
Unwept, unhonored, and unsung!"]

HOGS.

Weight—keep—and net profit of three.

Near Georgetown, D. C. March 27, 1824.

The following is at your service, to use as you please—I make no comment.

Having sometimes seen notices of hogs being raised to pretty large weights at early ages, I offer to you the result of my feeding three during the last season:—

About the 10th of March, 1824, I purchased three small pigs, which I ascertained were not more than five to six weeks old—however, they were so small that all three were fetched home in a bag on the shoulder of my labourer—they were kept loose in an enclosed barn yard until the month of June, when I had a good pen made, with a boarded floor, and well sheltered. They were killed on the 15th December last, and weighed on the 17th:

There united weights were	892 lbs.
Besides lard from the entrails	25
Total	917 lbs.

Or, average weight, at, say, 11 months, 302 1-3 lbs. each.

Their cost and mode of feeding as under; viz.

First cost,	$3 75
Up to July they had only the slop and waste of the house (a small family;) from that time to the last week in October, they had in addition, the fallen apples and peaches, on which they seemed to thrive very fast, and also corn, 9 bushels, cost,	3 47 1-2
And some rye meal, 16 1-4 bushels, which being fusty, cost me only,	3 31 1-4
This was mixed and fermented with the slop of the house. From the last of October to the 15th Dec. they had 3 1-2 barrels of corn, at $2,	7 00
	$17 53 3-4

There was nothing particular in the breed of these pigs, as they were bought fortuitously of a farmer not far from me. They were certainly under eleven months old, and yet with this weight they were by no means too fat for my family use, for which purpose they were cured. They would stand thus in account current:

	Dr.
First cost and charge,	$17 53 3-4
Labour, paid by the large quantity of manure made by them,	00 00
Profit,	24 85 1-4
	$42 39

	Cr.
Net pork, 892 lbs. at 4 1-2 cts.	$40 14
Lard from entrails, 25 lbs. which I sold at 9 cents,	2 25
	$42 39

AGRICULTURAL REPORTS.

New-Brunswick, N. J.—There is every appearance of a fine crop of fruit—particularly apples.

LITERATURE.

MARYLAND LAW INSTITUTE.

[The *moral* as well as the *physical* sciences deserve a portion of our attention; and though the latter fall more particularly within the scope of our design, yet we have great pleasure, on fit occasions, to call the attention of our readers to the progress of the former, and the means devised in our country, for their acquisition. The importance of the enterprise in which Mr. Hoffman is now engaged, cannot be made too generally known. In addition to his public lectures, as Professor of Law in the University of Maryland, he has established an institution for the reception of students of law from all parts of the union. In a circular letter addressed by Mr. Hoffman to students, he has fully explained his views. Would our limits permit it, we should be glad to insert the whole letter. We must be content, however, with the following extract.]

"Presuming it highly probable that a course of public lectures, particularly one of such vast extent as that in which I am engaged, would require various auxiliaries to insure its eventual success, I opened an establishment which I denominated the *Maryland Law Institute.* Too little regard, we think, has been paid in all countries to the comforts and convenience of those engaged in the toils of a long and arduous course of study. Students of law, in common with those of divinity and medicine, cannot be too strongly invited to constancy in their pursuits, and this can hardly be expected, unless their studies are directed, their doubts relieved, and the *locus studiorum* be in itself inviting. When the numerous days and nights, perhaps of many years, are to be spent in intellectual toils, it is fit that some attention be paid even to physical comfort. With this design the establishment has been opened in a spacious and commodious building in South, near Market street, in this city, the apartments of which have been handsomely fitted up, and arranged in every respect for the accommodation of students. The advantages of this institution are, in brief, *a course of methodical study adapted to the student's progress, and their separate views in regard to the place in which they design to practice their profession; colloquial examinations; union of practical with theoretical knowledge; oral and written discussions of legal subjects; frequent presentation of questiones vexatæ, and resort to an extensive library in every department of legal science and general knowledge.*"

[The above extract sufficiently explains the general objects of the institution. Mr. Hoffman lectures

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* Mr. Lewis, a worthy citizen, near Baltimore, has a prodigiously fine young horse, by Exile, (Mr. Patterson's imported horse,) out of an Eagle blood mare. He is very large, of fine figure, and will be let to a few mares this season. This colt could not be had for $1000, yet are gentlemen afraid to import a mare that would cost, in foal, in England, about 60 guineas!

daily from the 1st of October to the 1st of February, and from April to June, and as his class increases, it is his intention annually to add to his course until the whole of his design is completed. We must refer those who are specially interested, for further information, to Mr. Hoffman's "*Course of Legal Study*," "*Syllabus*," "*Introductory Lecture*," and the "*Circular Letter*." We would only add, that his fee is extremely moderate, and that we cannot see with what propriety *Law Students* should neglect such facilities, when students of *medicine*, from all parts of our country, assemble to attend medical lectures. We have been pleased to find in the Law Institute, students from nearly every state, but still, the extent of his undertaking, and the zeal and ability with which it is prosecuted, demand and merit a much more extensive patronage; and, for one, we would urge this gentleman to persevere in a scheme which is so manifestly useful, that ultimate success would appear to us inevitable.]

RECIPES.

TO DESTROY INSECTS IN VINES.

The red spider is the grand enemy to the vine; after every winter's pruning and removal of the outward rind on the old wood, anoint the branches, shoots, and trellis, with the following composition, the object of which is the destruction of their eggs or larvæ:—

Soft soap	2 lbs.
Flour of sulphur	2 do.
Leaf of roll tobacco	2 do.
Nux vomica	4 oz.
Turpentine	1 English gill.

Boil the above in 8 English gallons of soft river water, till it is reduced to six.

Lay on this composition, milk warm, with a painter's brush; then with a sponge carefully anoint every branch, shoot, and bud; being sure to rub it well into every joint, hole, and angle. If the house is much infected, the walls, flues, rafters, &c. are also to be painted over with the same liquor. Watering over the leaves and fruit at all times, except the ripening season, is the preventive recommended, and which all gardeners approve.

TO PROTECT GRAPES FROM WASPS.

Plant near the grapes some yew-trees, and the wasps will so far prefer the yew-tree berries, as wholly to neglect the grapes.

TO BOTTLE TABLE BEER.

As soon as a cask of table beer is received into the house, it is drawn off into quart *stone* bottles, with a lump of white sugar in each, and securely corked. In three days it becomes brisk, is equal in strength to table ale, remarkably pleasant, very wholesome, and will keep many months.

TO RENDER BOTTLED BEER RIPE.

The following method is employed in Paris, by some venders of bottled beer, to render it what they term ripe.—It is merely by adding to each bottle 3 or 4 drops of yeast, and a lump of sugar, of the size of a large nutmeg. In the course of twenty-four hours, by this addition, stale or flat beer is rendered most agreeably brisk. In consequence of the fermentative process that takes place in it, a small deposite follows, and on this account the bottles should be kept in an erect position. By this means white wine may likewise be rendered brisk.

TO KEEP HOPS FOR FUTURE USE.

Hops lose all their fine flavour by exposure to the air and damp. They should be kept in a dry close place, and lightly packed.

SPORTING OLIO.

SPORTING AND OTHER ANECDOTES,

AND MISCELLANEOUS ITEMS,

Taken chiefly from late English papers received at the office of the American Farmer.

Extraordinary Chase.—A few days ago, lord Fitzwilliam's hounds had one of the severest runs which they had experienced for thirty years. They met at Hunt's closes; but not finding there, drew Raund's old meadow, where they found a fox, which went away into Keyston field, where he was headed, and the hounds killed him before he again reached cover. A second fox was found in a plantation near Dentford Ash; he ran with uncommon speed and strength, and was killed about two miles from Huntingdon, after a run of upwards of three miles, with only one check of a few minutes. Out of a field of two hundred horsemen, only lord Milton, the huntsman, and six or seven others, were in at the death; in a ploughed field, in the parish of Alconbury, upwards of twenty horses were seen standing with their riders dismounted, who for some time in vain endeavoured either to lead or drive them on, they being ridden to a stand-still. The hounds passed through fourteen lordships, and the distance in a straight line is supposed to be about seventeen miles.

REGENERATION OF A COW.

[*Quere.*—Is it not probable that the cow-dealer, who got to windward of the doctor in the following case, had taken some lessons from "the *fancy*," who deal in the same articles about Baltimore? Could we not name a shrewd gentleman up Market-street, who bought up his own old cow, for a young one?]

A gentleman applied to Mr. Hobler, the chief clerk, to know whether the Lord Mayor could remedy a case, in which it could not but be considered that a very gross imposition had been practised.—The case, he said, related to an old cow, which had been sold, and foisted upon the seller very soon afterwards as a young one. Mr. Hobler requested to know how the deception was practised, as the imposture was to be collected from the circumstances. The gentleman said his friend had been already so much laughed at for allowing himself to be imposed on, that he could scarcely appear amongst his neighbours. It would therefore, perhaps, be injudicious to mention the case in a place, in which every thing that was said appeared before the public at breakfast next morning. Mr. Hobler said, that perhaps the public would be benefitted by knowing the nature of the imposition, and that the trick, if exposed, would stand no chance of being repeated.

The applicant then made the following statement: About a fortnight ago, a farmer residing at Epping Forest, having rather an elderly cow which began to be very slack of milk, he determined to get rid of her, and to purchase another. He accordingly took her to Romford fair, and sold her to a cow-dealer for about *4l. 10s.*, but he did not see any cow in the market promising enough in appearance, and returned home without a cow, but satisfied at the price he had got for the "old 'un." The cow-dealer calculated upon Smithfield market as a better *emporium* for disposing of his bargain, and accordingly drove her there, in order to sell her to the polony-pudding merchants; but there was a glut in that description of dainty, in consequence of the late floods, which have proved fatal to many poor beasts. The cow would not sell even for the money which had been just given for her, and the owner was about to dispose of her for less—when a doctor, who had been regarding the beast for some time, offered, for a fee of *5s.*, to make her as young as she had been ten years before. The fee was immediately paid, the doctor took his patient immediately to a stable, carded her all over, prescribed some strange diet for her, sawed down her horns from the rough and irregular condition to which years had swelled them, into the tapering and smoothness of youth, and delivered her to the owner, more like a calf, than the venerable ancestor of calves. The cow-dealer was struck with the extraordinary transformation, and it immediately occurred to him (a proof that a cow-dealer can be dishonest as well as a horse-dealer,) to sell her for the highest price he could get for her, without saying a word about her defects and infirmities. Having learned that the Epping farmer (an apron farmer, it may be supposed, by the upshot;) was in want of a cow, he thought he could not send his bargain to better quarters than those she was accustomed to, and he forthwith despatched her to Romford market, where her old master was on the look-out for a beast. She immediately caught his eye. He asked her age. The driver did not know, but she was a "fine young 'un." "I've seen a cow very like her somewhere," said the farmer. "Ay," said the driver, "then you must have seen her a long way off, for I believe she is an Alderney." "An Alderney! What do you ask for her?" The price was soon fixed. The driver got *15l. 7s.*, for the cow, and the farmer sent her home. The ingenuity exercised might be guessed at from the fact, that the person who drove the beast home had been at her tail for the last seven years at least twice a day, and yet he did not make the discovery, although she played some of her old tricks in the journey, and turned into the old cow-house, and lay down in her old bed, with all the familiarity of an old acquaintance. At length the discovery was to be made. The cow was milked, and milked, but the most that could be got from her for breakfast was a pint, and that was little better than sky-blue. The farmer, in grief and astonishment, sent her to a cow doctor, who had been in the habit of advising in her case, and complained that she gave no milk. "Milk!" said he, "how the devil should she, poor old creature? Sure it is'nt by cutting her horns and giving her linseed oil-cakes, and scrubbing her old limbs, that you can expect to make her give milk!" The farmer was soon convinced of the imposture, and would indeed forgive it if the laugh against him could be endured.

Mr. Hobler regretted that the Lord Mayor could not interfere. He believed that the farmer must be content with the benefit derived from his experience, which, it was to be hoped, would make him take a judge with him the next time he went to buy a cow. Some facts had reached him about the transformation of old jaded horses into spirited steeds, but he had not heard before of the effect filing down a cow's horns had in restoring old age to youth. He supposed this was what was meant by "grinding young." The Lord Mayor was afterwards informed by Mr. Hobler of the nature of the application; and his Lordship, who, however, could not help laughing at the deception, also regretted that nothing could be done, and declared that he wished it was in his power to punish a person capable of so scandalous a transaction.

Horse leap.—On Saturday, July 20, an extraordinary leap was made by a horse in the possession of Mr. Beardsworth, of Birmingham. On the ground being accurately measured by some gentlemen, who witnessed the performance, it was found, that in passing over a bar 3 feet 6 inches high, the leap was taken at the amazing distance of 17 feet 7 inches from it and the whole space of ground covered was 27 feet 8 inches. The horse is 15½ hands high, and carried upwards of 12 stone. He was afterwards rode over the same bar several times, and cleared upwards of *eight yards* without much apparent effort.

POETRY.

AN ECLOGUE—ON THE PLOUGH.

Wake up my muse! wake up my soul!
Survey the globe from pole to pole—
To what employment shall I bow?
Pursue the arts or hold the plough?
Upon a just and strict attention,
The plough appears a high invention.
The great Messiah, when he wrought,
Made yokes and ploughs, as we are taught,
Mogul, renown'd of India's land,
First takes the plough into his hand;
His millions then in honour toil
To pulverise the fertile soil.
The fam'd Elisha, you'll allow,
He drove the ox, or held the plough,
The stubborn earth he rent and tore,
With oxen number'd twenty-four.
Th' immortal Job, more rich and grand
Than any in the Eastern land,
He launch'd his ploughs—the earth gave way,
His thousand oxen rend the clay.
Of all pursuits by men invented,
The ploughman is the best contented.
His calling's good, his profits high,
And on his labours all rely—
Mechanics all by him are fed,
Of him the merchants seek their bread;
His hands give meat to ev'ry thing,
Up from the beggar to the king.
The milk and honey, corn and wheat
Are by his labours made complete.
Our clothes from him must first arise,
To deck the fop or dress the wise—
We then by vote may justly state,
The ploughman ranks among the great;
More independent than them all,
That dwell upon this earthly ball.
All hail, ye farmers, young and old!
Push on your ploughs with courage bold;
Your wealth arises from your clod,
Your independence from your God.
If then the plough supports the nation,
And men of rank in ev'ry station,
Let kings to farmers make a bow,
And ev'ry man procure a plough.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 8, 1825.

The prize essay on the Horse, which we have selected for this paper, occupies more space than we would wish to yield to one article; but the use of it would be much impaired by dividing it. Attention to this essay and the engraving which accompanies it, will enable every one, though without professional knowledge, to understand, and to designate by name, every part of this valuable animal, as well as the diseases incident to their mal-conformation.—There are few persons, whatever may be their vocation, who have not more or less to do with the horse; to most of *our* readers, he is a daily companion and faithful friend. Bold in war, yet patient in all the "dull pursuits of civil life," humanity, as well as interest, require that we make ourselves familiar with his anatomy and constitution; thence it is that we have appropriated so large a portion of a single number, to enable every young farmer to fulfil a duty, which ought to be as pleasing, as it is imperative.

The Editor will thank any gentleman who will send him some *Holly* berries—they are for a friend in Ohio.

Quere.—Is there in Europe, any adequate check established to control the keepers of *toll-gates?* It must be obvious to every one, that the temptation to defraud, which constantly presses upon these agents, ought to be, if practicable, provided against, and it is scarcely to be believed that in the old countries, where turnpike roads have been so long in use, the keepers of the gates have been left without check or control. In what other branch of business, or condition of life, are agents public or private, so irresponsible as the toll-gate keepers on the turnpike roads of this country?

QUERE TO THE BOARD OF TRUSTEES OF THE MARYLAND AGRICULTURAL SOCIETY.

Why has not a large premium been offered for the famed long-wooled sheep of England, as has been done at Brighton? T.

TO CORRESPONDENTS.

Under the new arrangements with our printer, it was impossible to insert the communication from Dr. Mease in reply to Agricola, in this number—it shall appear in our next.

TOBACCO.—Five hhds. tobacco, made by Rich'd Battee, of Anne Arundel county, sold this week at the following prices—One hhd. yellow, $28 per hundred; two ditto, $16; two hhds. second, $10; good red, well conditioned tobacco, is selling as well, if not better, than the last two years.—389 hhds. inspected in the last week.

FOR SALE,

A few pair of beautiful *Lambs*, by an imported *Tunisian Broad-Tail Ram* on *Merino Ewes*—an excellent cross. They were yeaned last January, and will be delivered next month, in Baltimore, at fifteen dollars a pair—male and female.

The sire of these Lambs carries a heavy fleece of good wool, free from hair, and is a fine hardy sheep.—Breeders should avail themselves of this opportunity of improving their flocks at a trifling expense. Apply to the Editor of the American Farmer. *April* 3.

GARRICK,

An imported *full bred* Devon Bull, will stand this spring and summer at the first Toll-gate on the Baltimore and Harford Turnpike Road, and be let to cows at *five* dollars each; the money in every instance to be sent with the cows and for which a warranty is given

Garrick was purchased under this name last summer, at one year old, from the celebrated stock of Mr. Childes near Bewaley who has for some years been the most extensive and successful breeder of North Devon cattle in England. and Garrick was acknowledged to be his best yearling at the public sale in September last; he is by *Prize* out of *Fill-Pail*, as per catalogue and pedigree which accompanied him.

April 2—4t JOHN BROWN, *Gate-keeper.*

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Essay on the Structure of the Horse—Extract from Address of Roberts Vaux—Philadelphia Society for Promoting Agriculture—Report of the Season—Improvement of Wool—Breed of Horses—Hogs—Law Institute—Recipes—Extracts—Editorial—Advertisements—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.		
		from	to	from	to	
BEEF, Baltimore Prime,	bbl.	8 50	9	9	10	
BACON, and Hams, . .	lb.	7	8			
COFFEE, W.I. Green, .	—	17		20		
do. Common,	—	15	16	18		
COTTON, Louisiana, &c.	—	22	24			
Georgia Upland, . . .	—	18	21			
COTTON YARN, No. 8,	—	33				
An advance of 1 cent	—					
each number to No. 16.	—					
CANDLES, Mould, . .	—	12	13	14	16	
Dipt, ...	—	10	11	10	12	
CHEESE, ...	—	6	8	10	12	
FEATHERS, Live, . . .	—	32	33			
FISH, Herrings, Sus. new	bbl.		3 50			
Shad, trimmed, new,	—	none				
FLAXSEED, Rough, . .	bush	80	85			
Cleaned, ...	cask					
FLOUR, Superfine, city,	bbl.	4 50	4 62			
Fine, ...	—	4 25				
Susquehanna, superfi.	—	4 50				
FLAX, ...	lb.	9	11			
GUNPOWDER, Balti. .	25 lb	5				
GRAIN, Indian Corn, .	bush	35	38			
Wheat, White, ...	—	90	95			
do. Red, ...	—	85	92			
Rye, ...	—	37	40			
Barley, ...	—	50				
Clover Seed, ...	—		3 50	3 75	4 00	
Ruta Baga Seed, . . .	—					
Oats, ...	—		22	25		
Peas, Black Eyed, . .	—			none		
Beans, White, ...	—			none		
HOGS' LARD, ...	lb.	9				
LIME, ...	bush	23	25			
LEATHER, Soal, best,	lb.	24	27			
Eastern Tan, ...	—	18	20			
MOLASSES, Havana, .	gal.	23	30	37		
MEAL, Corn, kiln dried,	bbl.	2 37				
NAILS, 8a20d.	lb	5½	6	7	8	
NAVAL STORES, Tar,	bbl.	1 75				
Pitch, ...	—	2				
Turpentine, Soft, . .	—	2	2 50			
OIL, Whale, common, .	gal.	25	27			
Linseed, ...	—	65				
PORK, Baltimoro Mess,	bbl	14	15			
do. Prime, . . .	—	10 50	11			
PLASTER, cargo price,	ton.	6 75				
POTATOES, ...	bush	33				
RICE, fresh, ...	c.lb.	3				
SOAP, Baltimore White,	lb.	14		18		
do. Brown, .	—	6	8	8	10	
WHISKEY, 1st proof, .	gal.	20	23			
PEACH BRANDY, 4th pr	—	65	82			
APPLE BRANDY, 1st pr	--		27			
SUGARS, Havana White,	c.lb.	13 00	13 50			
do. Brown, . .	—	8 50	9			
Louisiana, ...	—	7 25	8 75			
Loaf, ...	lb.	15	24	15	25	
Lump, ...	—	15	16			
SPICES, Cloves, ...	—	85				
Ginger, Ground, . . .	—	7	8			
Mace, ...	—	2	2 25			
Nutmegs, ...	—	1 40	1 50	1 70	1 75	
Pepper, ...	—	19				
SALT, St. Ubes, ...	bush	44				
Turk's Island, ...	—	49				
Ground Alum, ...	—	50				
SHOT, all sizes, ...	cwt.	9			9 50	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00	
do. L. M. . .	—	1 75	2			
do. Sicily, . .	—	1 10	1 15			
Lisbon, ...	—	1 30				
Sherry, ...	—	1 10	1 15	1 50	1 75	
Claret, ...	doz.	3	7			
Port, first quality, . .	gal.	2		2 50		
WOOL, Merino, full bl'd	lb.	40	45			unwashed but free of tags.
do. crossed, . .	—	30	35			
Common, Country, .	—	20	30			
Skinners' or Pulled, .	—	30	35			

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AGRICULTURE.

ON GRASSES

BEST ADAPTED TO PERMANENT PASTURE.

There has been much difference of opinion with respect to permanent pasture; but the advantages or disadvantages can only be reasoned upon according to the circumstances of situation and climate. Under the circumstances of irrigation, lands are extremely productive, with comparatively little labour; and in climates where great quantities of rain fall, the natural irrigation produces the same effects as artificial. When hay is in great demand, as sometimes happens in the neighbourhood of the metropolis, where manure can be easily procured, the application of it to pasture is repaid by the increase of crop; but top-dressing grass land with animal or vegetable manure, cannot be recommended as a general system. Dr. Coventry very justly observes, that there is a greater waste of the manure in this case, than when it is ploughed into the soil for seed crops. The loss by exposure to the air, and the sunshine, offer reasons in addition to those that have been already quoted in the sixth lecture, for the application of manure even in this case, in a state of incipient, and not completed fermentation.

Very little attention has been paid to the nature of the grasses best adapted for permanent pasture. The chief circumstance which gives value to a grass, is the quantity of nutritive matter that the whole crop will afford; but the time and duration of its produce are likewise points of great importance; and a grass that supplies green nutriment throughout the whole of the year, may be more valuable than a grass which yields its produce only in summer, though the whole quantity of food supplied by it should be much less.

The grasses that propagate themselves by layers, the different species of Agrostis, supply pasture throughout the year; and as it has been mentioned on a former occasion, the concrete sap stored up in their joints, renders them a good food even in winter. I saw four square yards of fiorin grass cut in the end of January, this year, in a meadow exclusively appropriated to the cultivation of fiorin, by the Countess of Hardwicke, the soil of which is a damp stiff clay. They afforded 28 pounds of fodder; of which 1000 parts afforded, 64 parts of nutritive matter, consisting nearly one-sixth of sugar, and five-sixths of mucilage, with a little extractive matter. In another experiment, four square yards gave 27 pounds of grass. The quality of this grass is inferior to that of the fiorin referred to in the table, in the latter part of the third lecture, which was cultivated by Sir Joseph Banks, in Middlesex, in a much richer soil, and cut in December.

The fiorin grass, to be in perfection, requires a moist climate or a wet soil, and it grows luxuriantly in cold clays unfitted for other grasses. In light sands, and in dry situations, its produce is much inferior as to quantity and quality.

The common grasses, properly so called, that afford most nutritive matter in early spring, are the vernal meadow grass, and meadow fox-tail grass; but their produce, at the time of flowering and ripening the seed, are inferior to that of a great number of other grasses; their latter-math, is, however abundant.

Tall fescue grass stands highest, according to the experiments of the Duke of Bedford, of any grass, properly so called, as to the quantity of nutritive matter afforded by the whole crop when cut at the time of flowering; and meadow cat's-tail grass affords most food when cut at the time the seed is ripe; the highest latter-math produce of the grasses examined in the Duke of Bedford's experiments is from the sea meadow grass.

Nature has provided in all permanent pastures a mixture of various grasses, the produce of which differs at different seasons. Where pastures are to be made artificially, such a mixture ought to be imitated; and, perhaps, pastures superior to the natural ones may be made by selecting due proportions of those species of grasses fitted for the soil, which afford respectively the greatest quantities of spring, summer, latter-math, and winter produce; a reference to the details in the appendix will show that such a plan of cultivation is very practicable.

In all lands, whether arable or pasture, weeds of every description should be rooted out before the seed is ripe; and if they are suffered to remain in hedge rows, they should be cut when in flower, or before, and made into heaps for manure; in this case they will furnish more nutritive matter in their decomposition; and their increase by the dispersion of seeds will be prevented. The farmer, who suffers weeds to remain till their ripe seeds are shed, and scattered by the winds, is not only hostile to his own interests, but is likewise an enemy to the public: a few thistles neglected will soon stock a farm; and by the light down which is attached to their seeds, they may be distributed over a whole country. Nature has provided such ample resources for the continuance of even the meanest vegetable tribes, that it is very difficult to insure the destruction of such as are hostile to the agriculturist, even with every precaution. Seeds excluded from the air, will remain for years inactive in the soil,* and yet germinate under favourable circumstances; and the different plants, the seeds of which, like those of the thistle and dandelion, are furnished with beards or wings, may be brought from an immense distance. The fleabane of Canada has only lately been found in Europe; and Linnæus supposes that it has been transported from America, by the very light downy plumes with which the seed is provided.

In feeding cattle with green food, there are many advantages in *soiling*, or supplying them with food, where their manure is preserved, out of the field; the plants are less injured when cut, than when torn or jagged by the teeth of the cattle, and no food is wasted by being trodden down. They are likewise obliged to feed without making selection; and in consequence the whole food is consumed: the attachment, or dislike to a particular kind of food, exhibited by animals, offers no proof of its nutritive powers. Cattle at first refuse linseed cake, one of the most nutritive substances on which they can be fed.†

When food artificially composed is to be given to cattle, it should be brought as nearly as possible to the state of natural food. Thus, when sugar is given to them, some dry fibrous matter should be mixed with it, such as chopped straw, or dry withered grass, in order that the functions of the stomach

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*The appearance of seeds in places where their parent plants are not found may be easily accounted for from this and other circumstances.—Many seeds are carried from island to island by currents in the sea, and are defended by their hard coats from the immediate action of the water. West Indian seeds (of this description,) are often found on our coasts, and readily germinate: their long voyage having been barely sufficient to afford the cotyledon its due proportion of moisture. Other seeds are carried indigested in the stomach of birds, and supplied with food at the moment of their deposition. The light seeds of the mosses and lichens probably float in every part of the atmosphere, and abound on the surface of the sea.

†For the following observations on the selection of different kinds of common food by sheep and cattle, I am obliged to Mr. George Sinclair.

Lolium perenne, rye grass.—Sheep eat this grass when it is in the early stage of its growth, in preference to most others; but after the seed approaches towards perfection, they leave it for almost any other kind. A field in the Park at Woburn was laid down in two equal parts, one part with rye grass and white clover, and the other part with cock's foot and red clover: from the spring till midsummer the sheep kept almost constantly on the rye grass; but after that time they left it, and adhered with equal constancy to the cock's-foot during the remainder of the season.

Dactylis glomerata, cock's foot, or orchard grass.—Oxen, horses, and sheep, eat this grass readily. The oxen continue to eat the straws and flowers from the time of flowering till the time of perfecting the seed; this was exemplified in a striking manner in the field before alluded to. The oxen generally kept to the cock's-foot and red clover, and the sheep to the rye-grass and white clover. In the experiments published in the Amœnitates Academicæ, by the pupils of Linnæus, it is asserted that this grass is rejected by oxen; the above fact, however, is in contradiction of it.

Alopecurus pratensis, meadow fox-tail.—Sheep and horses seem to have a greater relish for this grass than oxen. It delights in a soil of intermediate quality as to moisture or dryness, and is very productive. In the water-meadow at Priestley, it constitutes a considerable part of the produce of that excellent meadow. It there keeps invariably possession of the top of the ridges, extending generally about six feet from each side of the watercourse; the space below that, to where the ridge ends, is stocked with cock's-foot, rough stalked meadow grass, *Festuca pratensis*, *Festuca duriuscula*, *Agrostis stolonifera*, *Agrostis palustris*, and sweet-scented vernal grass, with a small admixture of some other kinds.

Phleum pratense, meadow cat's-tail.—This grass is eaten without reserve, by oxen, sheep, and horses. Dr. Pulteney says, that it is disliked by sheep; but in pastures where it abounds, it does not appear to be rejected by these animals; but eaten in common with such others as are growing with it. Hares are remarkably fond of it. The *Phleum nodosum*, *Phleum alpinum*, *Poa fertilis*, and *Poa compressa*, were left untouched, although they were closely adjoining to it. It seems to attain the greatest perfection in a deep rich loam.

Agrostis stolonifera, fiorin.—In the Experiments detailed in the Amœnitates Academicæ, it is said, that horses, sheep and oxen, eat this grass readily. On the Duke of Bedford's farm at Maulden, fiorin hay was placed in the racks before horses in small distinct quantities, alternately with common hay; but no decided preference for either was manifested by the horses in this trial. But that cows and horses prefer it to hay, when in a green state, seems fully proved by Dr. Richardson, in his several publications on Fiorin; and of its productive powers in England (which has been doubted by some,) there are satisfactory proofs. Lady Hardwicke has given an account of a trial of this grass, wherein twenty-three milch cows, and one young horse, besides a number of pigs, were kept a fortnight on the produce of one acre.

Poa trivialis, rough-stalked meadow.—Oxen, horses, and sheep, eat this grass with avidity. Hares also eat it; but they give a decided preference to the smooth-stalked meadow-grass, to which it is, in many respects, nearly allied.

Poa pratensis, smooth-stalked meadow grass.—Oxen and horses are observed to eat this grass in common with others; but sheep rather prefer the hard fescue, and sheeps' fescue, which affect a similar soil. This species exhausts the soil in a greater degree than almost any other species of grass; the roots being numerous, and powerfully creeping, become in two or three years completely matted together; the produce diminishes as this takes place. It grows common in some meadows, dry banks, and even on walls.

Cynosurus cristatus, crested dog's-tail grass.—The South Down sheep, and deer, appear to be remarkably fond of this grass: in some parts of Woburn Park this grass forms the principal part of the herbage on which these animals chiefly browse: while another part of the Park, that contains the *Agrostis capilaris*, *Agrostis, pumilis*, *Festuca orina*, *Festuca duriuscula*, and *Festuca cambrica*, is seldom touched by them; but the Welch breed of sheep almost constantly browse upon these, and neglect the *Cynosurus cristatus*, *Lolium perenne*, and *Poa trivialis*.

Agrostis vulgaris (*capillaris*, Linn.,) fine bent; common bent. This is a very common grass on all poor, dry sandy soils. It is not palatable to cattle, as they never and bowels may be performed in a natural manner. The principle is the same as that of the practice alluded to in the third lecture, of giving chopped straw with barley.

In washing sheep, the use of water containing carbonate of lime should be avoided; for this substance decomposes the yolk of the wool, which is an animal soap, the natural defence of the wool—and wool often washed in calcareous water, becomes rough and more brittle. The finest wool, such as that of the Spanish and Saxon sheep, is most abundant in yolk. M. Vauquelin has analyzed several different species of yolk, and has found the principal part of all of them a soap, with a basis of potassa, (*i. e.* a compound of oily matter and potassa,) with a little oily matter in excess. He has found in them, likewise, a notable quantity of acetate of potassa, and minute quantities of carbonate of potassa and muriate of potassa, and a peculiar odorous animal matter.

M. Vauquelin states, that he found some specimens of wool lose as much as 45 per cent. in being deprived of their yolk; and the smallest loss in his experiments was 35 per cent.

The yolk is most useful to the wool on the back of the sheep in cold and wet seasons; probably the application of a little soap of potassa, with excess of grease to the sheep brought from warmer climates in our winter, that is, increasing their yolk artificially, might be useful in cases where the fineness of the wool is of great importance. A mixture of this kind is more conformable to nature, than that ingeniously adopted by Mr. Blakewell; but at the time his labours commenced, the chemical nature of the yolk was unknown.

[*Davy's Agr. Chemistry.*

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eat it readily, if any other kinds be within their reach. The Welch sheep, however, prefer it, as I before observed; and it is singular, that those sheep being bred in the park, when some of the best grasses are equally within their reach, should still prefer those grasses which naturally grow on the Welch mountains; it seems to argue that such a preference is the effect of some other cause, than that of habit.

Festuca ovina, sheeps' fescue.—All kinds of cattle relish this grass; but it appears from the trial that has been made with it on clayey soils, that it continues but a short time in possession of such, being soon overpowered by the most luxuriant kinds. On dry shallow soils, that are incapable of producing the larger sorts, this should form the principal crop, or rather the whole; for it is seldom or never, in its natural state, found intimately mixed with others; but by itself.

Festuca duriuscula, hard fescue grass.—This is certainly one of the best of the dwarf sorts of grasses. It is grateful to all kinds of cattle; hares are very fond of it: they cropped it close to the roots, and neglected the *Fustuca orina*, and *Fustuca rubra*, which were contiguous to it. It is present in most good meadows and pastures.

Festuca pratensis, meadow fescue.—This grass is seldom absent from rich meadows and pastures; it is observed to be highly grateful to oxen, sheep and horses. particularly the former. It appears to grow most luxuriantly when combined with the hard fescue, and *Poa trivialis.*

Avena eliator, tall oat-grass.—This is a very productive grass, frequent in meadows and pastures, but is dis. liked by cattle, particularly by horses; this, perfectly, agrees with the small portion of nutritive matter which it affords. It seems to thrive best on a strong tenacious clay.

Arena flavescens, yellow oat-grass.—This grass seems partial to dry soils, and meadows, and appears to be eaten by sheep and oxen, equally with the meadow barley, crested dog's-tail and sweet-scented vernal grasses, which naturally grow in company with it. It nearly doubles the quantity of its produce by the application of calcareous manure.

Holcus lanatus, meadow soft grass.—This is a very common grass, and grows on all soils, from the richest to the poorest. It affords an abundance of seed, which is light, and easily dispersed by the wind. It appears to be generally disliked by all sorts of cattle. The produce is not so great as a view of it in fields would indicate; but being left almost entirely untouched by cattle, it appears as the most productive part of the herbage. The hay which is made of it, from the number of downy hairs which cover the surface of the leaves, is soft and spongy, and disliked by cattle in general.

Anthoxanthum odoratum, sweet-scented vernal grass. Horses, oxen, and sheep, eat this grass; though in pastures where it is combined with the meadow fox-tail, and white clover, cock's-foot, rough-stalked meadow, it is left untouched; from which it would seem unpalatable to cattle. Mr. Graot, of Leighton, laid down one half a field of a considerable extent with this grass, combined with white clover. The other half of the field with fox-tail and red clover. The sheep would not touch the sweet-scented vernal, but kept constantly upon the fox-tail. The writer of this, saw the field when the grasses were in the highest state of perfection; and hardly any thing could be more satisfactory. Equal quantities of the seeds of white clover, were sown with each of the grasses; but from the dwarf nature of the sweet-scented vernal grass, the clover mixed with it had attained to greater luxuriance, than that mixed with the meadow fox-tail."

THE OX AND THE HORSE.

Their value and economy for Pennsylvania Farming compared.

Buck's county, Pa. 28th March, 1825.

Mr. Skinner,

I have recently observed some remarks from correspondents in your paper respecting the comparative usefulness of horses and oxen. Although the subject may seem to be exhausted, I am not without hope of being able to add somewhat to the general stock of experience on this subject. In order to understand the relative value of animals of this nature, we have only to resort to actual calculation and such facts as will not be denied by any one who has the least *experience* on the subject.

In the first place, then, a pair of tolerably good work horses can be bought at 5 years old for $160—their lives may be averaged at ten years more, including diseases, accidents, &c.—the cost of keeping them, as our work horses in Pennsylvania are usually kept, will be for grain $1.20 per week, at the present price—the grain being ground, and used with cut straw, which is more economical than feeding whole grain: in addition to this grain, horses will eat about the same hay or grass that will sustain a pair of oxen—the latter food may therefore be estimated as common to both, and of equal expense. The cost of a pair of oxen four years old is $60, and they may be used five years without the least injury to their capacity for fattening—when, if the owner did not choose to make a profit in that way, he might sell them for $50. We have from these data the following results as to expense of the two animals:

EXPENSE OF HORSES.

1 pair of horses cost, ...	$160
Interest on the same 10 years at 6 per cent,	96
Expense for grain. exclusive of cut straw and labour of feeding, at $1.20 per week,	624
	$880

EXPENSE OF OXEN.

1 pair cost, ...	$60
An additional pair for the last five years, . .	60
Interest on $60 for five years—and $70 for five years, ...	40
	160
Deduct for two pair sold, at $50 each, . . .	100
Total cost for ten years, ...	60
Balance in favor of the oxen, ...	820
	$880

There are other considerations in favour of the ox, worthy of being taken into account: the harness of a pair of oxen, yoke and chain, costs about $4; that of a pair of horses about $20. The ox feeds through the summer on grass, and is ready for his labour in the morning as soon as his driver rises from his bed; but the horse must be allowed at least *one* hour in the morning to eat, which usually affords the driver an excuse for loitering *two*, during the most precious part of the day.

There is no kind of work on our farms, except dressing corn, which oxen may not be trained to perform as well as horses—also for hauling heavy loads short distances on the roads, they are equally as good, and much better for hauling logs; but the ox does not naturally endure heat as well as the horse; he seldom perspires, but habit will enable him to endure it for all necessary purposes. Nor does he naturally walk so fast—much may be done in breaking, to improve his walk. But my object is to examine him as he is usually found. Allowing then for the difference of his capacity to endure heat and for that of his speed, my experience is, that a pair of oxen will plough 1 1-2 acres while a pair of horses will plough 2 acres. This difference will be allowed by all experienced persons as a liberal estimate in favour of the horse. Now, if we suppose the same difference to exist in all other kinds of labour to which the ox is adapted, it will give the labour of the horse to that of the ox as 4 to 3—and according to the foregoing estimate, the expense of 3 horses for ten years, (their average life of useful labour,) will be, ... $1320

That of 4 oxen, ...	120
General balance in favour of oxen, . . .	$1200

It must be admitted, however, that there are many purposes to which the ox is not adapted: such as going on distant journies with despatch, the carriage, gig and saddle, to which that of dressing corn must be added. No farmer can therefore dispense with all his horses; but it is bad economy to keep a single labouring horse more than is necessary for those purposes which the ox is not adapted for—and when the number of horses which must be thus occasionally employed, is sufficient to perform, at their intervals of leisure, all the other business of the farm, it would be bad economy to keep oxen; for it costs very little, if any more, to keep horses constantly at work, than it does to keep them in idleness. A horse, though a noble, is an expensive animal, and the high state of his domestication has given him a constitution liable to innumerable diseases, (not found among animals more in a state of nature,) which increases the expense of his maintenance. He is also, from his spirit, more easily spoiled than the ox. A late writer in your paper, who observed that the ox was not as true to the draught as the horse, could not have had any general experience on the subject; for all who have long used both animals know that the fact is quite the reverse. The present is a period when it behoves farmers to practice the most rigid economy. I think there cannot be a doubt, that the introduction of oxen as a substitute for working horses, would greatly improve our agricultural economy—but as this cannot be done very generally upon small plantations, some other substitute must be found, or we must endure the inconvenience. This, I am persuaded, may be done most effectually by the introduction of mules. This animal, except for the saddle and pleasure carriage, will perform all the service of the horse, at about one third of the expense. But I am sure you must have a distaste for long essays, and will forbear enlarging on this branch of economy at present.

Yours,

COLUMELLA.

IMPROVED SHORT HORN CATTLE.

Remarks on the communication signed Agricola, in No. 52, vol. 6.

Philadelphia, April 2, 1825.

TO THE EDITOR,

The piece signed Agricola, in No. 52 of your 6th vol., escaped my notice until this day. I cannot permit it to pass without a few remarks, as it is calculated to excite animosities and irritating discussions, which, in a journal like yours, ought never to be permitted. Politicians will squabble, but cultivators of the soil, and the friends to agriculture, ought to live in harmony with one another.

The object of the paper by Agricola is to prove, that the zeal of the advocates of the "improved short horned cattle" is not founded in "cool and deliberate judgment," but in a love of "novelty;" and that "the old stock is better than the new." To prove this, he refers in the first place, to some passages from a writer in your 5th volume, which Agricola says, would "induce a belief that the Teeswaters possess the quality of subsisting without food." Too much, however, is made of the passage alluded to. No one can suppose that the writer literally meant what is attributed to him—but merely that upon short allowance in winter, the improved short horns lived while other breeds suffered. That cattle which take on fat so readily as the "improved short horns," would live better on scanty food through the winter than common cattle, I can easily conceive, because it is a well known fact, that the absorption of fat by a set of vessels called lymphatics, in the bodies of all animals, takes place when food is withheld, and as the short horns possess more than an ordinary degree of it, they would be able to endure privation of food with less injury than common cattle, which are deficient in this source of internal nourishment.

2d. Agricola attempts to show the inferiority of the "improved short horns" by comparing the weight and quality of a seven year old steer fed by Mr. Lowry, and recently killed in Philadelphia, with some cattle of Gen. Ridgely's breed, and killed at the same time. He says the steer was of the "Teeswater breed," and gained a premium at the agricultural exhibition near Philadelphia, in June 1822, for his great merits: In answer, I reply, that the "Teeswater" and "improved short horns" are not synonimous. The former was, indeed, the foundation from which the latter admirable stock was produced, and upon which such great changes have been made by judicious crosses, as to entitle it to the character of a new creation. The progress of improvement in this breed, was detailed in my letter (written at your request,) of April 4, 1821.* Upon reference, moreover, to the account of the exhibition in the American Farmer, vol. 4, p. 123, I find that the premium of $10, was given to Mr. Lowry for having produced the best steer between the ages of one and five years. No mention is made of his breed. The steer having produced only "1302 lbs. of inferior beef, at the age of seven years, is therefore no argument against the superior merit of the "short horns." I do not wish to make comparisons between the genuine specimens of that breed, and Gen. Ridgely's stock, which I have not seen, but which I am willing to believe are worthy of commendation. My sole object is, to correct the errors into which Agricola has fallen, by arguing from false premises, and to defend the character of a breed of cattle, to which I have long been a steady friend, although owning none of them. I believe I may safely say, that I first called the attention of the American public to their merits,† and the superior quality of Mr. Champion's stock was made known to the United States by my remarks on the cattle procession that took place in March 1821, in Philadelphia.‡ The pure stock of that eminent improver, is now in four states of the Union, and their descendants in several more, all of which will gradually effect a revolution in our cattle which will add to the comfort and wealth of the country.

JAMES MEASE.

EXTRACTS FROM AGRICULTURAL ADDRESSES.

(Continuation of extracts from the address of Roberts Vaux, Esq.)

Next in importance to the improvement of the land by judicious modes of cropping, and the application of restoratives suited to the various qualities of the soil, are roads, bridges, canals, and the rendering of streams navigable. The husbandman will toil in vain, if the products of his labour cannot reach a market by a moderate expenditure of time and money. The necessity of facilitating the intercourse between the interior, remote parts, and the sea board of Pennsylvania, was early perceived by many of her enlightened citizens, who, in the prosecution of their designs, had to contend with difficulties similar to those which impeded the exertions to renovate her husbandry. Some improvements had been made during the provincial age of Pennsylvania, by the removal of obstructions to the descending navigation of rivers; but the first turnpike constructed on this side of the Atlantic, is that which was completed between Philadelphia and Lancaster in 1794. Since that period, more than a thousand miles of artificial road have been made of stone in various parts of the commonwealth. Bridges of great magnitude and beauty have also been thrown across our principal rivers, at an expense of more than a million and a half of dollars, whilst the utility and cost of those of an inferior grade, in nearly all the counties of the state, cannot be readily estimated. It is now almost half a century since the noble design was formed of uniting the Delaware and Susquehanna rivers, by means of the waters of the Schuylkill and Swatara. The failure of so grand a scheme, with great pecuniary loss to those who engaged in it, vitally affected the interests of our agriculture; but the lock navigation rapidly progressing to completion on the same route, penetrating as it will to a remote interior point, hitherto inaccessible by such modes of communication, promises to all our different interests results of the greatest magnitude. The difference between transportation upon a good turnpike and upon a common road, is familiar to every one; but the difference is immense between even the best turnpike and a canal. A single horse will draw, with ease, twenty-five tons, two miles and a half per hour upon the latter; but to move an equal weight upon the former, at the same rate, would require forty horses. What a vast saving must here be made in animals and in provender, and a large part of this, too, for the benefit of the husbandman; because his stock may be less, and his saleable produce greater, and he may be enabled to carry many new articles to market, by all the difference of consumption. Canals will also promote the use of oxen instead of horses, to the acknowledged profit of the farmer.

The introduction of coal will constitute a new era in Pennsylvania. It will enable the farmers of a large district to convert grounds occupied by wood to the production of valuable crops, and lime and other manures will be transported by canals, to points which they could never otherwise have reached. Canals will likewise greatly contribute to promote the policy of the state, in the subdivision of property; and by giving additional means for sustaining a large population upon a small surface, must create new towns, new manufactories and new markets. Had not the canal of New York eclipsed almost all similar undertakings, a distinguished place might be claimed for Pennsylvania, as a patron of inland navigation. The works on the Schuylkill, now completed, extend one hundred and eleven miles. Forty miles of the Union canal are nearly finished, and when the latter reaches its termination, the aggregate will not be much short of two hundred miles. To encourage and promote in future the formation of canals, wherever the geological features of the territory invite, or will admit of such improvement, is at once the duty and the interest of all who seek the permanent welfare of our agriculture. In addition to the early aids afforded to the husbandry of the state, I ought not to omit the important fact, that the selection and introduction of valuable domestic animals was not disregarded, even when the minds of the early benefactors of agriculture were directed to the primary duty of increasing the products of the land. Some excellent breeds of sheep, and swine, were brought from abroad, many years ago, and great pains were taken to spread them among our farmers. But the great importance of this subject has been but recently urged with effect upon their notice. Our useful fellow citizen and associate, John Hare Powel, whose indefatigable labours deserve the highest commendation, has, at much expense, imported some individuals of the best families of cattle and sheep known in Europe. His judicious and liberal design is to prove, that all the beasts which administer to our necessities, or conduce to our comforts, ought to be chosen and bred in reference to their respective qualities. The horse, for the various employments to which that noble and generous animal is so admirably fitted. The ox, whether for labour, or for the shambles. Sheep, whether most profitable for the fleece, or carcass. The cow, as adapted to the dairy, or otherwise more advantageous, as circumstances and interest may dictate. To this laudable pursuit, combined with rural affairs generally, he has succeeded in awakening the attention of a body of respectable and intelligent cultivators of their own farms, in various counties of the state, who, constituting "*The Agricultural Society of Pennsylvania*," will no doubt contribute largely to the general good.

The first volume of the Memoirs of that society, containing the observations and experience of practical farmers and breeders of stock, will, I trust, be widely disseminated for the instruction and gratification of their brethren throughout our country.—And although, in some respects, the association may be regarded as a rival of this institution, I am confident the members of the parent establishment, whom I now address, will never cease to contemplate, with unaffected pleasure, the prosperity and usefulness of all its descendants, however numerous they may become throughout the land. Associations of this kind have performed no small part in bringing agriculture to its present improved state, and they deserve to be classed among the most efficient means of future advancement to that dignified occupation. To these beneficent ends, this society has been devoted for forty years, in the course of which it has sought information, and maintained an intercourse with similar institutions, and with individuals engaged in the promotion of improvements in the agriculture of Europe, whence it has derived not only books of great utility, but implements of husbandry of various kinds, as well as grains, grass, and other seeds, and roots, which have been here cultivated with profit. Nor is this all: the information thus obtained from abroad, and the experience of practical husbandmen at home, placed at its disposal, have been extensively and freely distributed, with acknowledged benefit. These means, various and efficient as they may seem, would have been in a great degree inoperative, but for the salubrious climate of Pennsylvania, which, co-operating with industrious habits, has formed a hardy race, whose physical and moral faculties, generously exercised, have increased the agricultural riches of the state.

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* American Farmer, vol. 3, No. 4.

† See Archives of Useful Knowledge, vol. 1, p. 294; Ib. p. 358, Philadelphia, 1810; with a portrait of a fine bull of the improved breed. See also American Farmer, vol. 2, pp. 314, 406.

‡ American Farmer, vol. 3, pp. 17, 29.

Corroborative of this idea, it is believed that the parallelogram bounded

North-west, by the Blue-ridge,

North-east, by the Delaware,

South-east by the Delaware, and the canal which is about to connect it with the Susquehanna, and

South-west, by the Susquehanna, contains a greater proportion of arable land of superior quality, and a greater population on a square mile, than any equal extent in the Atlantic states; whilst it cannot be doubted, that the same region enjoys advantages in mineral products, streams, &c. which few other sections of our country can boast.

PROSPECT OF CROPS.

Richmond, 5th April, 1825.

TO THE EDITOR,

Times are getting much better with us, and I hope your subscribers in Virginia will increase greatly.—The new zeal and capital employed in the American mines, will produce double the annual supply of specie we have had for many years. This will, of itself, cheapen the value of money; and cause a rise in the price of property and labour. To this cause add the new policy which Great Britain seems disposed to adopt, in withdrawing her restrictive measures, and the effect must be felt most seriously in the southern states. The duty on tobacco, heretofore nearly $1 per lb. is to be reduced to 50 cents. This will open a new source of consumption to the article. Many who have not before been able to indulge the use of it, will now do so; and there will be less *trick* in its manufacture in Great Britain.—The *price* of the article has never borne any proportion to the duty on it. At the moment that this flattering prospect is presented to the tobacco planter, a new source of agricultural profit opens on the husbandman of Virginia and North Carolina, in the article of cotton. All the land in both states, heretofore devoted to tobacco, but suitable to cotton, will be put in the latter article, as most profitable and less troublesome. The increased use of cotton fabrics of every description, and the annual increase of the population of the world, are, in my poor opinion, at least equal to any increase in the production of the article. So that the price must remain for a long time sufficient to compensate the labours of the planter. So long as the policy of the government will even protect the fair *intercourse* of the cotton and tobacco planters, with foreign countries, so long may they rely on their own industry and resources for competency, if not for wealth. But a solicitude, *too paternal*, on the part of the government, is much to be dreaded. All we ask is, *let us alone; protect the weak against the strong;* and *make knaves pay their debts.* The freemen of this country are not CHILDREN, that they are to be fed and clothed by their protectors and guardians. A political and natural guardian are two different things.

I took up my pen but to ask you to send your paper to a friend; and you see I am running off at random into political economy. The theme is too inviting, and I deny myself a pleasure when I cut short reflections which might be less acceptable to you.

Poplar Grove, Queen Anne's county,
11th April, 1825.

The crop of wheat, generally, in this county looks flattering for the time of year, and taking my crop altogether I have decidedly the best prospect I ever had. Whether the "grand destroyer" is yet to make his ravages, time only will disclose. If the weather continues seasonable till the 1st of May, his incursions will be put at defiance. Our season is at least *three weeks* in advance of what it usually is by the 11th of April.

In haste, but respectfully, yours.

Versailles, Ky., 28th March, 1825.

We have had the most pleasant winter in Kentucky that I have witnessed in 45 years; indeed we have had none like it, except the winter 1780, '81, which succeeded what has ever since been called the hard winter. There was more snow in the winter '87, but perhaps less hard weather. We have not had more than three inches of snow the past winter: and we have had turnip greens since Christmas; some of my cabbages has stood out all the winter and are now going to seed.

AGRICULTURAL QUERIES.

ON HOVEN SHEEP.

Fredericksburg, 8th April, 1825.

The Bakewell sheep you bought for me two years ago have turned out remarkably well, and have improved my flock 100 per cent. I unfortunately lost the old tup and three of my ewes a few days ago, from eating too freely of clover, into a fine field of which they were turned—the weather being moist and warm. Have any of your correspondents experienced a similar loss from the same cause? and is there a cure when attacked?—They were in fine order—evidently swelled with excess of food, and died in 8 or 10 hours from the time they showed symptoms of uneasiness.

[The flexible tube to be bought in the shops, would doubtless have given relief.]

ON PREVENTING LAND FROM WASHING.

I should also wish information on another subject, if any of your correspondents can give it—the means of preventing lands on the banks of our large rivers washing away and caving in. I have lost annually for the last ten years at least half an acre of land on the Potomac, where the river is seven miles wide, and the bank thirty feet high—it is a north-east exposure—and I should prefer some trees that would shelter it from these winds, as well as keep up the banks.

ON THE RUST OF GOOSEBERRIES.

Mrs. ——— is in the cultivation of two varieties of gooseberries—the one in its fruit, fair, smooth, and in all respects of easy management, but most pertinaciously unproductive. The other, *vice versa*, singularly prolific, but the berry so enveloped in rust (and bidding defiance to every method short of manual agency to remove the evil) as to render it of less value than its almost barren neighbour, the amazing fecundity of the latter to the contrary notwithstanding.

Any information which it may be in your power to afford on this subject, will be thankfully received by both Mrs. ——— and yours, &c.

[On receipt of the above, we took a ride to the garden of P. E. Thomas, who at one time imported from England 60 kinds of gooseberries. He shewed us that the fruit was most rusty where it was most exposed to the *north*, and less so in proportion as its aspect was more southern. We shall be glad to have further information founded on experience.]

QUERE—AS TO THE PRESERVATION OF PLUM TREES.

Sycamore Farm, March 24th, 1825.

Through your valuable journal I would beg leave to inquire, what remedy (if any) there is to prevent the dropping of plums before ripe. I have three very fine looking plum trees of natural fruit in my garden, which for several years have borne regularly until a few weeks before ripening, when they all fall; and from their size and appearance promise to be something fine, as the three trees have never ripened one solitary plum, to give an opportunity of judging of their quality. I have tried some remedies recommended as infallible, such as hanging on old iron, gravelling round the root, and bruising the bark, without any good effect. Any remedy for the above evil would at least favour

A LOVER OF FRUIT.

[We hope the inquiry of our correspondent will soon be answered through the Farmer.]

HORTICULTURE.

THE CHEROKEE ROSE.

[Of the thousands of cuttings of the Cherokee Rose of South Carolina, distributed gratuitously, by Mr. Rowan, we have very few reports. We had the pleasure to see it growing most luxuriantly at Plimhimmon, in Talbot county, in October last, on a rich and rather moist spot of ground. We were highly gratified with its appearance of health and prospect of continued vigorous growth. The branches were very long, and seemed to have grown very rapidly, but inclined to spread on the ground.

It is due to Mr. Rowan, and will be acceptable to the public to publish even the following brief notice of the success of these plants, being all we have received, and this not being intended for publication, the writer's name is omitted.]

Mr. Wm. H. Tilghman, who is particularly attentive to whatever he undertakes, has growing a very beautiful hedge, on the north side of his garden, composed of a row of cedars and a line of Cherokees one foot from them on their south front. The long arms of the nondescript have certainly manifested a fondness for embracing and entwining the branches of the cedars, and the combination of these two beautiful evergreens is rapidly forming a very ornamental enclosure.

You probably observed that though the growth you saw was vigorous, many of the arms having flung off 6, 8, and 10 feet, they evidenced a disposition to trail too much, and are too low yet for a good fence. This idea of a middle line of cedars with a guard row of Cherokees on both sides, if the Cherokees can be prevented from strangling the cedars to death, may be useful. The cedars will give support to the rose, and the requisite height to the fence; the strong thorns of the roses would completely guard the cedars, and the combination form an impervious, most useful, and beautiful hedge.

RURAL ECONOMY.

ON THE QUALITIES OF STUCCO,

AS USED IN BALTIMORE.

Northampton, 28th March, 1825.

Sir,

Having noticed in your city several buildings of brick, which were covered with a composition made to represent stone, the object of this letter is to inquire of you, if it resists the weather, and if it is more or less expensive than the painting of a brick building with oil, &c.

Should you be of the opinion that it will resist our northern frosts, I would thank you to inform me if it requires a particular artist to perform the labour, and if so, if he can be obtained in your city. Which will much oblige.

[Not being practically familiar with the subject, we referred the above to Mr. W. F. Small, a most respectable and highly promising architect and artist of our city, from whom we received the following reply. The whole matter being one of public interest, we give it to our readers.]

Baltimore, April 2, 1825.

Dear Sir,

In reply to your note of this morning, relative to the character of our mode of stucco plastering, (called sometimes rough casting,) I am enabled from experience to say, that where the materials have been selected and used with proper attention, I have never known it to sustain injury from the frosts, and am of opinion, that our climate, from its sudden changes and excessive heats, is less favorable to stucco plastering than the colder and more regular climate of New England—observing also, that it should never be deferred in use later than July, or 1st of August, and the earlier in the season (avoiding the frosts) the better, that it may be thoroughly dry before overtaken by frosts. Our mode of stuccoing in imitation of marble was first introduced in Richmond, Va. by Mr. John Gill, (a New England man) by whom it has been also introduced in Baltimore. It was he who plastered the Unitarian Church,* the Exchange, and Masonic Hall, inside and out, and is now engaged in plastering the Baltimore Athenæum, which, I flatter myself, will do him much credit. Should your friend inquire of him further, you are safe in recommending on my responsibility as a man in every particular worthy of patronage. Yours, respectfully,

WM. F. SMALL.

N. B. Stucco is done by Gill (in Baltimore) inclusive of materials, for 40 cents per square foot, exclusive of scaffolding. W. F. S.

INTERNAL IMPROVEMENTS.

RAILWAYS.—second edition.

Philadelphia, March 22, 1825.

The acting committee of "The Pennsylvania Society for the Promotion of Internal Improvement," have been, from the formation of the society, particularly desirous to lay before the public correct information on the subject of *Railways.* The publications of Europe, and informed individuals, were applied to for this purpose; but it was found that although many facts were obtained, valuable and important in themselves, yet no connected view could be given of them, and that many differences of opinion prevailed, which, at our distance from the works to which they apply, could not be correctly estimated.

Under these circumstances, the proposed publication by the committee of the society, has been heretofore withheld; although, the attention of the legislature and the public having been directed to railways, the desire of the committee to make the society useful to the community by a communication in relation to them, was much increased. Within a few days the means of accomplishing these purposes have been obtained by the acquisition of a recent valuable work, issued by the Highland Society of Edinburgh—and the following paper, carefully prepared from this work, will furnish much valuable and interesting information upon railways. The agent of the society, who will depart for Europe in March, will have particular instructions to examine and report on the subject of railways, and collect all the facts which may be necessary to enable our fellow citizens to resort understandingly to one of the most valuable internal improvements now in use.

MATHEW CAREY,
JOSEPH HEMPHILL,
RICHARD PETERS, Jr.
STEPHEN DUNCAN,
WM. STRICKLAND,
Acting Committee.

Gerard Ralston, *Cor. Sec'ry.*

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Feb. 22, 1825.

The Highland Society of Edinburgh offered for two successive years a premium or reward of a piece of plate valued at fifty guineas, for the best essay, model, or drawing, which might tend to the advancement of the Railway system. Various essays were presented, but none deemed worthy of the premium. All, however, being possessed of considerable merit, the amount of the premium was distributed among the several writers.

Mr. Robert Stevenson, civil engineer, at the request of the Highland Society, has selected an historical account of railroads, together with certain modes suggested for elevating loads from one level to another.

He remarks, that the government has, with the most enlightened policy, advanced one-half the necessary funds for opening roads in the north of Scotland, while the landed proprietors have contributed the other.

The wealth of England enables her to stand unrivalled in the formation of her waterways or numerous canals. By these the *horse* load has been much extended, and the conveyance of merchandize greatly facilitated. In Scotland and Wales, her less wealthy neighbours have endeavoured to supply this want, by the construction of numerous railways, which are, *perhaps,* better adapted than canals to the undulating surface of their respective countries; while they are more economical, and more generally applicable to the ordinary purposes of commercial traffic.

Lord Keeper Guilford in 1676, thus describes the wagons and railways:—"The manner of the carriage is by laying rails of timber from the colliery to the river, exactly straight and parallel; and bulky carts are made with four rollers fitting these rails, whereby the carriage is so easy, that *one horse* will draw down four or five chaldron of coals, and is an immense benefit to the coal merchants."

The method of bringing coals from the wall face to the pit bottom, was greatly improved by the introduction of cast-iron rail-roads below ground, in place of wooden ones. For this improvement the mining interest is indebted to Mr. John Curr, who introduced them about the year 1776, into the duke of Norfolk's works, near Sheffield.

The wooden railways of the present day are composed of pieces of timbers called *sleepers,* about 6 feet long and 6 inches square, laid across the road, at a distance of 18 or 24 inches from each other; and upon these sleepers, other pieces of timber, called rails, of 4 or 5 inches square, are laid in two parallel lines, 4 feet distant from each other.

The wagon wheels are constructed with a groove to correspond with the rails, and run with little friction. The friction in some instances is materially lessened by covering the wooden rails with malleable or cast iron.

The railway between Kilmarnock and Troon harbour is laid with flat plate rails of 3 feet in length and 4 inches broad, weighing about 40 lbs. each; having a ledge or flange rising perpendicularly on the inner side of the rail about 4 inches, which is raised in the centre, and declining at both ends of each rail to add to its strength.*

They are somewhat broader at both ends, to make them lie more solid on blocks of stone from 9 to 12 inches in thickness, and more than a foot square in base and surface. The ground, upon which these blocks of stone are laid, is beaten down so as to give them a solid bed. The iron rails are bedded level on the blocks, and a hole about 1 1-4 inch in diameter is made 6 inches deep in the centre of each block. The hole is filled with a plug of oak. The rails have a square notch formed in the centre at both ends of each of the rails, about half an inch on the top, and somewhat narrower on the under side. The ends of the rails are placed together. The notches in each form one square hole, which being placed over the plug of wood in the centre of the stone, a nail is driven into it, the head of which exactly fills up the hole in the ends of the two rails; the holes are *countersunk,* and the heads of the nails are *flush* with the top of the rail.

The space, or horse track between the rails is 4 feet wide, being filled with broken stone up to the sole of the rails; but on the outside it is nearly to the top of the *flanges.* This is a double railway: and the distance between the two *ways* or *roads* is equal to the *width of the road.* A horse may travel in the middle space with a wheel on the inner range of each of the roads.

The rail *now* generally introduced is called the edge-rail, and consists of a bar of cast iron about 1 1-2 inch in breadth for the seat of the wheel, and from 3 to 4 feet in length, and of a depth corresponding with the weight to be carried. These bars are set up on edge, instead of being laid flat, and are therefore much stronger, *weight for weight,* than the flat laid bars. The edge rail is altogether free from the great disadvantage arising from the accumulation of *mud, sand,* or *gravel,* on the *flat or concave* tracks, which has occasioned much interruption to the carriage wheels; for it is elevated 2 or 3 inches above the level of the pathway, and presents at the same time so acute a surface, that hardly a single grain of sand can remain upon it. It has been considered a great inducement to give the flat rails a preference to the edge ones, in consequence of the *suitableness* of their wheels for travelling either on the *rails* or upon common *well kept hard roads.* In an account given of the Surrey railway, which is 26 miles in length, it is said the rail-wheels are 2 feet 5 inches high, the fellowes or rims of the wheels 2 inches broad, and nearly as thick, with 12 spokes; the sharp angles are rounded off, so that the wheels are capable of being used without damage on any common hard road, a very great advantage attending the *modern* use of *railways.*† The axles of the wheels are fixed at 2 feet 7 inches distance; the wagons are 7 feet 9 inches long, 4 feet 5 inches wide, and 2 feet 4 inches high; and the weight of the wagon is 2 1-4 tons. This railway is a *double one,* and the inclination nowhere exceeds 1 in 120, or 1 inch in 10 feet.

The difficulties presented to the draught in ascending steep places in *roads,* are little, compared with the numerous obstructions that are continually interposed by small *stones* and *gravel* before the wheels, on even the best made roads. The draught in the most level *road* yet made, may be said to be a continual *uphill work.* Indeed, were it not for the velocity acquired by a carriage in motion, the obstructions presented by an intervening stone, of small size, would be altogether insurmountable. It is not surprising that a *horse* on a *railway* should be able to draw so much more than on the best made gravel road or causeway. And as the very essence of the *railway* principle is to present a uniform track to the wheels, unencumbered with obstructions of any kind. therefore the more *these circumstances* are understood, the more general will be the desire to have *railways* extended in every quarter.

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* The plastering in the Unitarian Church, especially of the columns supporting the orchestra, is certainly the most beautiful work of that kind we have ever seen.

* See figure 1, p. 30.

† These wheels are only adapted to the *plate rail,* where the flanges are cast upon the rails, for the direction of the wagons; but the flanges must be upon the wheels in the case of the edged railway.

In England and Wales the plate rails, with stone props, seem to have become general; but experience has since shown. that the edge rail possesses many advantages over the plate or flat track; and malleable iron is coming every day into use for edge rails.

The usual mode of laying railways is to place the upper surface of the rails a small distance above the level of the horse track. The consequence is, that the *cresting* or *stuffing* on each side is continually coming in contact with the wheels, to the great disadvantage of the draught. As these earthy matters cannot be supposed of *the smallest use* for keeping the rails in their places, it is much better to *lay the rails so as to be wholly above the level of the horse track.* Such a construction gives additional facilities for drainage; and may be termed a *skeleton railway*, from the whole structure being exposed to view.—This description of railway has been applied in *practice* with much advantage in several situations, particularly at Lord Elgin's extensive *coal and lime works.*

The wagons on cast iron railroads have not received the improvements of which they are capable; but with their present disadvantages, the following facts will evince the great saving of animal force to which railways have given rise:

First, with a declivity of 1 1-4 inch per yard, one horse takes downwards three wagons, each containing 2 tons;

Secondly, with a rise of 1 6-10 of an inch per yard, one horse can take 2 tons upwards;

Thirdly, with 8 feet rise in 66 yards, which is 1 5-10 of an inch per yard, *one horse* takes 2 tons upwards.

Fourthly, on the Penrhyn railway, being the same slope as above, two horses draw downwards four wagons, containing one ton of *slate* each.*

Fifthly, with a slope of 55 feet per mile, *one horse* takes from 12 to 15 tons downwards, and 4 tons upwards, together with the empty wagons;

Sixthly, at *Ayr*, one horse draws on a level 5 wagons, each containing one ton of coals;

Seventhly, on the Surrey railway, one horse on a declivity of one inch in 10 feet, can draw 30 quarters of wheat.

In the present form of the coal wagon, the whole lading operates like a *wedge* to burst the sides of the wagon asunder, which has led to an expensive mode of lining them with plate iron, which adds considerably to the weight, increasing the burden in the same proportion. The form should be reversed, making them broader at bottom than at the top. It is not necessary that the difference should be great. A *single inch* would be sufficient to relieve the wagon from a constant pressure upon its sides. The wagon should not be made to contain more than 24 cwt.; for the benefit to be derived from having the lading distributed in many wagons, rather than in a few, is so great, that the system already introduced; of having as many wagons for as many *tons*, ought to be adhered to; for the *lighter* the lading, the *less pressure* on the rails, the less *racking* and *wearing*, both of the rail and wagon.

The wheels generally used are 27 inches in diameter, and are formed wholly of cast iron, and weigh 1 1-2 cwt. each, 4 of which, together with their axles, weigh from 7 to 8 cwt. being nearly equal to the whole weight of the body of the wagon; and the whole weight, including the wheels and body, is more than one-half of the load. The wheels might be constructed sufficiently strong at less than one-half the weight. They might be made of wood, 2 inches in diameter, with an iron tire, which could be renewed as required. while the rest of the wheel remained perfect. Cast iron wheels are very liable to *snap or break:* and when any part of them wears down unequally, the whole must be thrown aside. It has been suggested, as a great desideratum, to adapt the wheels of common carriages to railroads, and *vice versa*, adapting the wheels of railroads to the *common road;* but however desirable this accommodation of circumstances might be, it does not appear in any view of the subject to be very practicable. The loose manner in which the wheels of *carts* or *common carriages* are fitted to their *axles,* could not be made to coincide with the *accuracy* required in the railway system, and which indeed is essential to its best effects:—the best mode of overcoming this difficulty would be, to have the body of the wagon unconnected with the axles, so that it could be *removed* with its *load* by means of a *crane*, from the *railway carriage* to the common *cart or wagon*, which will perhaps under all circumstances be found the most effective in *practice.*

Admitting the great utility of an interchange of carriages to and from the common road, there is still another desideratum in the railway system, that of *raising the wagons from one level to another,* so as to admit. in an undulating tract of country, of the power of the horse being uniformly exerted upon a level or slightly inclined road; and although *various plans and suggestions* have been made applicable to the local situation of respective districts, they are *more or less* objectionable on account of the application of various *machines,* moved by the powers of steam, water, wind and animal power, in a perpendicular lift, or upon an inclined plane; and *again*, it is hardly to be expected that any single plan can be found to possess a universal character of practical utility.

It would appear from the foregoing remarks upon this interesting subject, many of which have had the sanction of experience, that the *form* of the rail has been greatly improved, by adopting the *edge*-rail in place of the *flanged* or flat-rail, even to doubling the effect, a horse drawing 10 tons on the one, as easy as 5 on the other.

2nd. That substituting *malleable* iron, instead of cast iron, offers an additional improvement, as it is considerably cheaper, and less apt to get out of shape.

3rd. That constructing wheels of *wood* rather than of cast metal, would be an improvement with respect to price and durability, but more especially with respect to weight.

4th. That *rail-wagons* cannot be well constructed to suit an ordinary road or street.

5th. That small wagons are better adapted to railways than large ones, whilst, neither the weight nor the cost. per ton, would be augmented from a greater number being required.

Some of the most celebrated engineers have given it as their decided opinion that railways are preferable to small canals. Railways may be constructed in districts where canals are wholly inapplicable. The subject is far from being yet exhausted, and it certainly deserves every possible consideration. There is no undertaking that would lead to more extensive and permanent improvements.

List of the amount of ladings on the following railways in Scotland, drawn by a single horse. The Earl of Eglinton's at Ardrossan, a concave iron track, from 3 to 6 tons, the distance of about half a mile. The Duke of Portland's, at the Troon, 8 miles, a flat iron track or plate-rail, generally 4 *tons* 13 *cwt.* Messrs. Taylor's, at Ayr, *an edge railtrack*, commonly 8 *tons*, sometimes 10, about a mile in length. Mr. Laing's, *an edge railtrack*, generally 8 tons 16 cwt. sometimes 11 *tons;* including in all these cases the weight of the wagons. The Earl of Eglinton's and Messrs. Taylors' railways are on a *dead level.* The Duke of Portland's on a *descent* of 8 *feet in a mile.* Mr. Laing's is on various lines of draught.

FIG. 1.

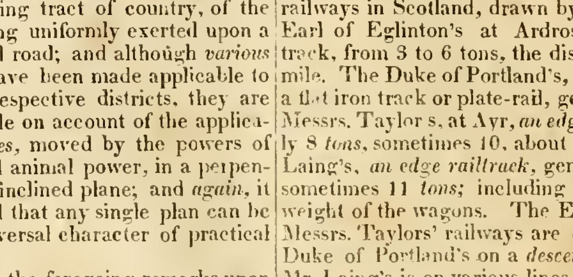


FIG. 2.

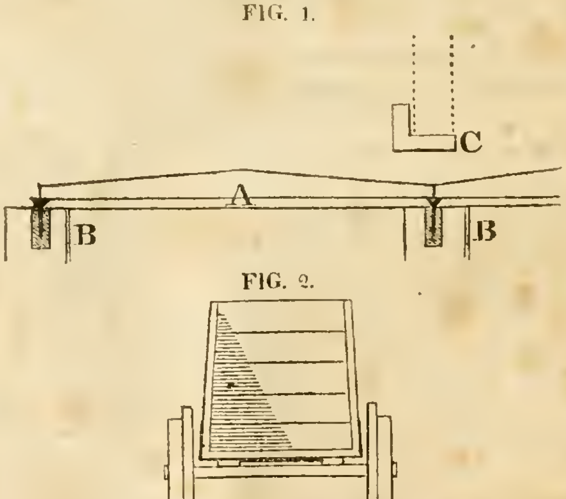
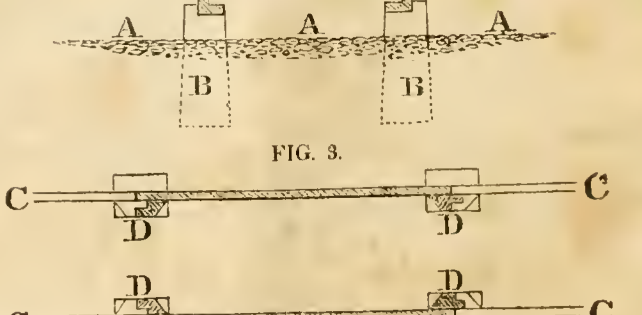


FIG. 3.



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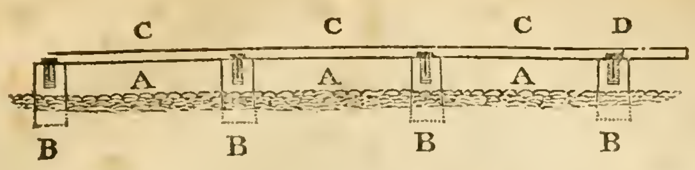
* At Penrhyn railway in Wales, the horses go three in a team, and generally take down about 20 wagons, containing each one ton of Slates, exclusive of their feed, and a barrel of water for wetting the rails, to render the draught more easy.

FIG. 4.



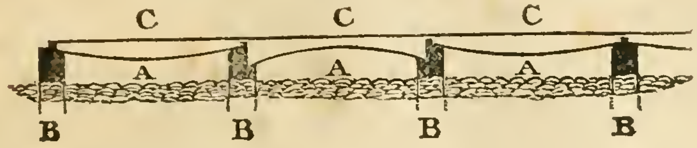


FIG. 5.

EXPLANATION OF THE PLATES.

Fig. 1.

A, is the profile of a *flat* railway, with the flange; the perpendicular portion of a triangular shape, at right angles with the horizontal surface A, on which the wheels revolve. This form is given to the flange for the purpose of strength.

BB, stone piers or props, showing the wooden plug or nail driven therein, to secure the rail in the proper position.

C, a section of the flat rail, the dots representing wheels moving on the horizontal surface C. The perpendicular portion is the section of the flange.

Fig. 2.

Is a section of a car or wagon; and a section of the edge railway for which it is designed.

AAA, the surface of the earth. The central portion, A, is the path for the horses. It is sometimes raised above, or sunk below, the surface of the ground adjoining the railway.

N. B. By omitting the interior wheels, (the flanges,) and substituting a spike, attached to the axle of the car, which can come in contact in a *single point only*, much friction will be prevented.

Fig. 3.

Is a plan, or bird's eye view, of the edge railway.
CCCC, the edge rail.
DDDD, joints resting on the stone props.

Fig. 4.

Is a profile and section of an edge railway, in which common bars of iron are used without any alteration.

BBBB, the stone piers.
CCC, is the bar.
D, is the joint, wooden plug, and nail.

Fig. 5.

Is a profile of the improved railway. The reversed arch, or springing arch, as at AAA, renders the iron bar *stronger* than the same quantity used in *fig.* 4, in the form of a bar of uniform thickness. The arches are all reversed, or all similar to the centre; but to comprise them in one plate, they are represented as differing in the same railway.

BBBB, stone or wooden props to support the bars. They must be sunk to a depth sufficient to protect them from the action of the frost.

They may be elevated to the height of two or three feet above the surface of the soil, to protect the rail from the snow. It will also improve the line of draught.

In this rail, the upper portion, CCC, on which the wheels glide, being one inch and a half in thickness, the under portion, AAA, is reduced to three-fourths of an inch. The strength of this form permits this with perfect safety; thus exhibiting the maximum of strength, with the minimum of material.

It has not been deemed necessary to exhibit an engraving of the convex or of the concave rails; in these no flanges are required, The wheels of the cars are constructed with convex or concave rims, which, accurately corresponding to the curves cast on the rails, prevent the cars from deviating.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 15, 1825.

TO CORRESPONDENTS.

It is well and truly observed by Doctor Mease in this number, that "politicians will squabble, but that cultivators of the soil ought to live in peace and harmony with each other." There is not a single reader of the Farmer more *decidedly* averse than is its editor, to the insertion of any thing calculated to excite "animosities or irritating discussions." It was the apprehension of exciting such irritating discussions which made us unwilling to insert Agricola in No. 52 of the last volume; still we had not firmness to follow our own judgment; we yielded to the too common infirmity of wishing to please all, and the yet stronger wish, in that case, not to displease a much esteemed friend of ourselves personally and of this establishment.

For our own part we care not a fig for one breed of cattle more than another. We were much gratified, as an admirer of all good stock, and a lover of fine beef especially, to see in a Philadelphia paper the account of Mr. Barney's very fine heifer, as appeared by weight and age, and moreover felt a little proud that she was derived from Maryland stock, (Gen Ridgely's,) and we lost no time in publishing the account of her great weight and excellent quality of beef; and here, according to our judgment, it would have been better to have let the matter rest.

When the object is merely to compare her or any other animal with another of a different race at home or abroad, then the plainest and most satisfactory way will be, to give statements of *age, weight, keep, and quality*, together with *correct portraits,* if they can be had, that their *forms* may be judged of. We should be glad to have such data in this, or in any other remarkable case. As an agricultural topic of general interest, it is desirable to have the qualities of different races discussed and compared; let the good and the bad be pointed out—let the great essential points of age, weight, keep, milk, meat, and temper, be given; but let not recourse be had to reflections or sarcasms *ad hominem.* It is one thing to question the excellence, or expose the defects of a particular *breed*—it is quite another thing to charge all the advocates of any breed with

* * * * * * * * *

Communications on hand from Agricola and Curwen are withheld, and will not be published *in totidem verbis;* though, to close the controversy, we shall give the substance of both in our next, with further remarks of our own—for which we have now no room, and very little inclination. The withdrawal of the name of one gentleman, from whom we were wont to receive many good offices and communications, has already grown out of this controversy. We care not a farthing for the loss of one name, or one dozen, or ten dozen names, in comparison with the mortification of our journal being the cause of exciting any ill blood, or wounding any gentleman's feelings. The American Farmer was not projected with any regard to the politicks, or merely to the number of patrons it might receive—we value the length of its subscription list at a farthing rushlight, when put in competition with the satisfaction and the honour of dispensing by the light of its columns. *solid and lasting benefit to the best interests and to the most virtuous class of society.*

THE MARYLAND SOCIETY FOR INTERNAL IMPROVEMENT, recently organized in Baltimore, at their meeting on the 5th inst., resolved to institute an "EDITORIAL DEPARTMENT," to be placed under the control of J. S. Skinner, Fielding Lucas, jr., and J. H. B. Latrobe.

They further recommended the publication of a *Quarterly Journal*, to be entitled the "AMERICAN JOURNAL OF INTERNAL IMPROVEMENTS," and have invited J. S. Skinner, Editor of the American Farmer, to edit and publish it—and appointed a committee to confer with him on the subject.

The proposed journal is to be conducted on broad national principles, and is intended as a Repository for valuable essays, reports of committees, and of commissioners, and boards of civil engineers, &c. appointed by national and state authorities, relating to railways and turnpike roads—the construction of bridges and canals—the working of mines of coal and iron—the application of steam and gas to the lighting and warming of factories and public buildings, and the propulsion of machinery and vehicles for the transportation of passengers and merchandise. It is, in short, intended to serve as a complete history of the rise and progress of public works and internal improvements in all the states—and to promote the execution of them on the most economical plans.

The price of the Journal will be $5 per annum—It will be sent gratis to every member of the Maryland Society for Internal Improvement, and every subscriber to it, will, upon being ballotted for, become a member of said society.

The Pennsylvania Society for Internal Improvement, being made acquainted with the proceedings of the Maryland Society, held a meeting, and in a spirit of liberality, expressed their "cordial approbation" of the object and plan of the publication, and unanimously recommended it to the support of their fellow citizens.

NEXT CATTLE SHOW—It is believed that the next exhibition on the first Wednesday and Thursday in June, will be the most interesting we have had, particularly in the number of fine animals there will be there *for sale.* We hear of fine wooled sheep coming (not for premium, but sale,) from Steubenville, in Ohio, and from Connecticut—also, a number of fine horses, cattle, &c. We advise all who have any thing of superior qualities, to reserve it for that occasion; nor ought purchasers to buy until that opportunity offers.

The motion to reduce the duty on Tobacco, made in the British House of Commons on the 10th of March, and anticipated by our Richmond correspondent, was negatived.

The Editor trusts that the improved appearance of his journal, (now printed on type cast in this city by Mr. R. B. Spalding,) with contents no less valuable than heretofore, will warrant him in asking the aid of each one of its friends, in procuring new subscribers. Any previous volume, or all the numbers of the present (7th) volume which have appeared, may be had.

The Editor is grateful and returns his thanks for the promptness and punctuality with which his subscribers are paying their dues. He congratulates his Southern friends on the improvement of their staples, and hopes the turn will soon come for the growers of grass and grain.

A most destructive fire occurred last week in Boston. The loss is estimated at $500,000—the number of houses consumed, fifty-three.

TOBACCO.—The following account of actual sales, reported for the American Farmer, is the best view we can give of the state of the tobacco market.

One hhd. yellow tobacco, made by Mr. David Ridgeley, sold for $30 per hundred; 12 hhds. Patuxent tobacco, made by Mr. Clem. Dorsey, of Saint Mary's county, sold for $4¼ for second and $9¼ for first; 10 hhds. Potomac tobacco, made by Mr. George Thomas, of Saint Mary's county, sold for $5 for second and $10 for first. The demand for yellow tobacco has increased within the last week.—625 hhds. inspected in the last week.

PRICES OF AMERICAN PRODUCE IN FOREIGN MARKETS.

We confess that we have no *tact* for keeping a commercial record, or for making commentaries or prognostications on matters of sheer speculation and trade—all we can promise is to keep our standing prices current as near the exact state of this market as possible, and to give, occasionally, the latest accounts of material changes in the price of our staple commodities in foreign markets. For these we must rely on the newspapers of the day. In regard to *cotton*, the editor has been furnished by a friend with the following item from a letter received by him from a very respectable house in New York.

(COPY.)

Dated, April 9th, 1825.

We have seen a letter from a French manufacturer to-day, who has manufactured Egyptian cotton for a long time, and says the cotton this year is very inferior, and looses at least 11 per cent. in manufacturing, 5 *a* 6 per cent. of which is sand. The late accounts from India was one cause of the extraordinary rise in England, from the 22d February to 3d March, which are that the crop of cotton amounted to almost an entire failure. If there should be allowed the proportionable consumption of American cotton in England to the last year, the stock of 64,000 bales on hand at the end of 1824, with all that has gone forward which will arrive there before the 1st of April, (this month,) it is supposed there will not be a bale of American cotton left at that date. What do you think of this view of the subject, which is the opinion of wiser heads than ours, and can be clearly demonstrated on matters of fact.

LATER FROM ENGLAND.

The ship New-England, of Boston, Capt. Berry, arrived at this port last evening, with London papers of the 13th, and Liverpool of the 15th ult. one week later than before received. Their contents are chiefly interesting to the commercial community. The following extracts are given in the morning papers:—

LIVERPOOL MARKET, *March* 12.

On Saturday and Monday last, particularly Monday, we had a brisk demand for Cotton, and our prices advanced during the two days about 1¼ to 1½ per lb. but from Tuesday till Friday evening we were very flat, and lost about one half the advance mentioned.——The sales of the week (the bulk of which were made during the first three days,) amounted to 17,600 bales, which included the following American descriptions: 9,200 bales Uplands at 13⅓ to 15d; 550 Orleans 14 to 16d; 420 Tennessees 12½ to 14d, and 260 Sea Islands at .6d to 7s 6d. On Saturday, a better demand sprung up again—the sales on that day amounted to about 4,000 bags, at an advance on that day of 1s 4d on Friday's prices. We are still in the hands of the speculators, who can raise or depress us at their pleasure. Ashes have been gradually on the decline. Sales last week, 630 bbls. Montreal Pots, 37 a 35s 5d; 200 bbls. Pearls 41s 6d to 40s 6d. No sales of U. S. Ashes, except 40 bbls. stained Pots, at 38s to 38s 6d. 1085 bbls. Turpentine of prime qual. brought the advanced price of 13s 6d.—222 ts. Cloverseed sold at 62s to 70. Sales of Flaxseed, 54 hhds. Baltimore, at 60s; 400 old N. York at 70s, and 100 do. new, at 80s. The business done in Tobacco, has been very trifling.

The speculative demand last noticed for almost every description of West India produce, nearly subsided during the week.

P. S.—March 14th, evening.—There was a moderate inquiry for Cotton this evening, which increased towards the close of the business. The total sales of the day are estimated at 10,000 bags—7,000 of which are Egyptian 13¼ a 13½d. The remainder were chiefly American, and of which there were 1,300 Uplands at 13. Prices remain without alteration.

SEED, GRAIN, FRUIT, &c.

Deposited since last notice with the Editor of the American Farmer, for the use of his subscribers.

HOLLEY BERRIES, From B F. Mackall. Esq. of Cœcil, and Mr. R. Watkins, of A. A. also from Col. Emory, for a correspondent in Ohio. For remarks of Col. E. on the adaptation of this shrub, for hedges, see next number of the Farmer.

A basket of the NEEDLES APPLES, from W. H. Tilghman, Esq. with the following note:

Talbot County, April 6, 1825.

Capt. Roe will also deliver to you a small basket of the Needles Apple, by which name they are known with us; as I do not recollect ever having seen any of the kind, either on a private or public table, during five years residence in Baltimore, such fruit may be acceptable to many of your citizens and our brother farmers generally.

It is now too late to furnish them with cuttings the present season, which I will do hereafter if any one should wish them. The sample of fruit is the best recommendation I can give it, as the proof of the pudding is in the eating. This apple is considered as a fall fruit, and as such is superior to any I know, and have been preserved in their present state through the winter with no other care, than frequently picking out the specked fruit, kept in a dry cellar in open barrels.

[The above mentioned apples were extremely fine, very juicy, round, of light orange colour, with a slight blush on one side. They were placed on the dinner table at Mr. J. B. Morris', yesterday, and were much admired by the Board of Trustees, as was unequivocally proved by the declarations of the company, and yet more expressively by ——— the *gout* with which they were eaten.]

BROCOLI and CAULIFLOWER-SEED, From Mr. Jefferson, sent to him by a friend at Leghorn; but few of these received, and all distributed.

SEED of SYMBLINS and PUMPKINS, Of superior quality, from Col. Powel.

A cut of LUCERNE, Sent by Col. J. E. Howard, 16 inches high. He has two acres of this grass, over which the scythe is now passing for soiling cows and horses. How long will it be before any other grass is ready for the same purpose; yet how few cultivate this most valuable resource for the farmer.

CONTENTS OF THIS NUMBER.

On Grass—The Ox and Horse—Improved Short Horn Cattle—Extract from Address of Roberts Vaux—Prospect of Crops—Agricultural Queries—The Cherokee Rose—On the Qualities of Stucco,—Railways—Internal Improvement Company—Cattle Show—Editorial—Commercial—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9	9	10
BACON, and Hams, . .	lb.	7	8		
COFFEE, W.I. Green, .	—	17	21	20	25
do. Common,	—	15	16	18	
COTTON, Louisiana, &c.	—	27	28		
Georgia Upland, . . .	—	22	24		
COTTON YARN, No. 8,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	10	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32	33		
FISH, Herrings, Sus. new	bbl.		8 50		
Shad, trimmed, new,	—	none			
FLAXSEED, Rough, . .	bush	80	85		
FLOUR, Superfine, city,	bbl.	4 75	5		
Fine, ...	—	4 37			
Susquehanna, superfi.	—	4 75	4 87		
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5			
GRAIN, Indian Corn, .	bush	35	38		
Wheat, White, ...	—	95	1 10		
do. Red, ...	—	95	1 00		
Rye, ...	—	37	40		
Barley, ...	—	50			
Clover Seed, ...	—		3 50	3 75	4 00
Ruta Baga Seed, . . .	—	1			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—			none	
Beans, White, ...	—			none	
HEMP, Russia, clean, .	ton	125			
HOGS' LARD, ...	lb.	9			
LIME, ...	bush	23	25		
LEATHER, Soal, best,	lb.	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	23	30	37	
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	5½	6	7	8
NAVAL STORES, Tar,	bbl.	1 75			
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2	2 50		
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	33			
RICE, fresh, ...	c.lb.	3			
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	20	23		
PEACH BRANDY, 4th pr	—	65	82		
APPLE BRANDY, 1st pr	—		27		
SUGARS, Havana White,	c.lb.	13 00	13 50		
do. Brown, . .	—	8 50	9		
Louisiana, ...	—	7 25	8 75		
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16		
SPICES, Cloves, ...	—	1 10			
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	2 50			
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	19			
SALT, St. Ubes, ...	bush	44			
Turk's Island, ...	—	49			
Ground Alum, ...	—	50			
SHOT, all sizes, ...	cwt.	9			9 50
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. L. M. . .	—	1 75			
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Sherry, ...	—	1 10	1 15	1 50	1 75
Claret, ...	doz	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled,	—	30	35		

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AGRICULTURE.

SHEEP.

Notes, and translations from Spanish authors, made at St. Ildefonzo, Segovia, and that vicinity, in 1815, by Anthony Morris, Esq.—with a view to the collection of information relative to the origin, utility, and management of the *Merino Flocks* of Spain; and now published by his permission in the American Farmer. They will serve to gratify curiosity, to show how universal has been the demand for them, how extensive and permanent the benefits they have conferred on other countries; and, if duly appreciated, how likely they are to become one of the most certain and useful sources of the prosperity of our own.]

Spain has been, from the most remote periods to which our historical researches extend, celebrated, as well for the great number, as for the superior quality of her flocks, the fleeces of which were said to have been first called golden, either from the great prices they commanded, or from their colour and beauty. The golden apples of the Hesperides (of which we read,) are said by some of her writers, to mean the beautiful flocks which fed on the banks of the far-famed Betis, now the Guadalquivir, whose fleeces they describe as in colour resembling the rays of the sun, or the first blushes of the morning. Other writers assert that every ram was worth a talent, (see Varro, book 2d, c. 2.—Col. de re rustica, lib. 7, c. 2.) and that the wool of Andalusia exceeded that of Colchos; but none of them explain, with certainty, from whence came, originally, these fine wooled flocks. We only know, from their testimony, (Col. and Varro,) that the sheep of Spain had been crossed by rams brought from Africa, by which their wool was improved, as is asserted by Pliny in his Natural History, and by Strabo in his treatise on Betica. In these ancient authors, we find no notice of the *trashumacion*, or change of place and pasture, now, and for some centuries past, used in Spain by the flocks called merinos; neither does any evidence remain of the actual state of the flocks of Spain in the times of the Goths, or of the Moors. Lasterie, in his treatise on the flocks of Spain, indeed, asserts generally, that the fine wooled species had been restored by the Moors; and Masdieu also, in his *Historia critica de Espana Arabe, tomo* xiii. p. 117, alleges that they appreciated duly the horses and flocks, and that their fabrics of wool, flax, cotton and silk, were esteemed throughout Europe.

It is probable that the Moors, who occupied parts of Spain from about the middle of the 8th to the 15th century, preserved the casts of fine fleeced sheep in some perfection, and that the Christians retained in the northern provinces some flocks, from which were first formed those of Segovia and Soria, and from whence it is reasonable to suppose began the practice of trashumacion: though it is difficult to ascertain precisely its actual commencement, it is indisputable that it existed before the year 1200, and had made some progress in the time of the re-population of Segovia by Alonzo I. of Castile, and VI. of Leon, about the year 1088. In the year 1200 there were established in Segovia, shepherds, who travelled with, and changed the pastures of their flocks, as appears by the privileges granted to them by Alonzo III. of Castile; who, taking under his protection all the flocks of Segovia, commanded that they should be permitted to pass, and to feed freely in every part of his realm, without molestation or hindrance to their shepherds, by taking toll from, or otherwise impeding them. (see Colmenar's Hist. of Segovia, cap. 18.) The same privileges were extended by Sancho III. in 1158 to the flocks belonging to the monastery of Valbuena; and by Alonzo VIII. to that of Las Huelgas of Burgos. It appears from a pamphlet of the laws of the Mesta, by the licentiate Diez Navarro, that in the year 1170 some flocks of sheep were imported into Spain from England, on occasion of the marriage of Alonzo III. of Castile with Leonora, daughter of Henry II. of England. The founding of the village of Placentia in Estremadura, by the same Alonzo III.—the conquest of others—and finally the union of the crowns of Castile and Leon in the person of St. Ferdinand, adding the territories of Truxillo, Cáceres and other neighbouring cities of Estremadura, provided for the itinerant shepherds from the Sierras, facilities for increasing and for maintaining their flocks in the winter, in those more temperate climates. The extent of territory, gradually reconquered from the Moors, greatly enlarged the fine fields of pasturage, and invited the flocks from the mountains.

In the reign of Alonzo the wise, we find the first systematic code of pastoral legislation, which confirmed and established the rights and privileges that had already been granted to the shepherds by his father. Sancho the brave, adopted and extended this system of privileges in the year 1285, ordaining that no tax or tribute should be levied upon them. Succeeding kings confirmed these ordinances—and particularly Alonzo XI. in 1347, in whose reign also sheep were imported from England into Spain, and the office of judge of the Mesta was instituted.

The Padre Sarmiento, in a letter to the duke of Medina Sidonia, on the subject of the mesta, asserts, that the *ganados mestinos* were unknown in Spain until the last years of the reign of this king Alonzo XI.; suggesting his opinion, that at this period originated the fine wooled flocks, and that they owe their origin to England, adding that the common people called them merinas, meaning marinas, from having crossed the sea. This opinion of Sarmiento, however, seems unsupported and even refuted, by the consideration that in the ordinances of Alonzo the wise, and his successors, are often found the terms *mesta*, *consejo de la mesta*, and *ganados mestinos*—signifying the meeting of the shepherds to consider and determine on pastoral affairs. Lost flocks are also called mestas or mestinas, in an ordinance of Alonzo IX. of Leon, in 1229, in which are found these expressions—*guardar las mestas, no ocultarlas, venderlas, ni mudarlas, la marca,* ascertaining the adoption and meaning of the terms mesta and mestenos before the reign of Alonzo XI.

But it is most probable that the term merino, as applied to the itinerant flocks, was taken from the title of the judge who presided over the pastoral affairs of the kingdom, and who was called *merino de pastores.* There seems little probability in the suggestion that the introduction of a few English flocks in the reign of Alonzo XI. should have been the origin of the Spanish merinos; a suggestion rendered still less probable by the known fact, that there are not now in England any flocks, the quality of whose wool is comparable to that of the flocks of Spain, though they may admit of a comparison with some of the stationary flocks of Estremadura.

The fine quality of the Spanish merino wool, it is ascertained, has not degenerated in the last three hundred years. The most valued flocks in Spain are those which feed during summer on the mountains of Leon, and are called Leonesas; they belong principally to the grandees and to the rich convents. The Segovianas are second in repute; they feed on the Sierras of Segovia, and its neighbourhood. Next are the Sorianas, which feed in the vicinity of Soria, Molina, &c. There are also numerous stationary flocks, of fine wool, which never leave Estremadura; some in the province of La Mancha, and others, which have never left their native mountains. The whole number of the fine wooled flocks, amounted in the year 1808, before the irruption of the French, to about six million, which, by this event and its consequences, were reduced to one half of that number.

The result of these inquiries then, is, that from the most remote ages, flocks of the finest wool have been found in Spain; that during its possession by the Romans, these flocks were crossed, and their quality said by Varro and Colmenar to have been improved by rams from Africa; that notwithstanding the want of precise information on this subject, during the reign of the Gothic kings, well founded conjectures lead us to believe that these flocks were not extinguished, and that they were preserved and cherished by the Moors, who were much devoted to agriculture and pastoral life; that the Christians also preserved, in the mountainous regions, some flocks, amidst all the confusion of arms, and gradually extended them into the reconquered provinces; that these flocks having found their first and principal stations in the Sierras of Segovia, Burgos, and Soria, began from thence their travels to the more temperate provinces of the south, to avoid the severity of winter among the mountains; that the facilities to their passage and the privileges of the shepherds were increased about the year 1170, and afterwards confirmed in the reign of el Santo Fernando; that neither the flocks which were brought from England in the reign of Alonzo III., nor in that of Alonzo XI. and Henry III., gave rise, as suggested by some, to the race of merinos, though it appears that they were encasted with them, for which purpose also rams were introduced from Barbary in the reign of Don Pedro, and of the catholic kings, a practice which had previously been adopted by the Romans in Spain, and which was used by the British, who, as it appears, had imported from thence many flocks; and, finally, that although the origin of trashumacion is somewhat uncertain, the first ordinances for its regulation are found in the reign of Alonzo the wise. These appear to be the principal facts which are recorded relative to the origin and habits of the fine wooled flocks of Spain, called merinos, as distinguished from those which are called coarse wooled, (*churras burdas ó bastas,*) The causes of the fine quality of the merino wool are variously accounted for; by some, in their continued annual exercise in descending in winter from the northern sierras to the southern plains, and again returning in summer to the mountains; in the quality of the herbage found in their pastures, and in avoiding the extremes of heat and cold. Others, again, impute this superior quality of wool to the circumstance of the flocks living and lying always in the open air, without being shut up in folds or stables. But by reference to the before mentioned ancient writers, we do not find that any mention is made of trashumacion by the flocks of Betica, so much celebrated; and even confining our observations to the present times, and to the province of Estremadura, we find there numerous flocks of sheep whose fleeces are very little inferior to those of Segovia, although they never leave their native fields. Many are also found in the sierras of Segovia, Buitrago and Pedraza, called *rebanos estantes* or stationary flocks, which never change their pastures, and are competitors for fineness of wool with the merinos. Neither is trashumacion known in England, yet their fleeces are next in quality to the merinos; nor has the habit been adopted in France, Saxony, Sweden, and other countries, to which the flocks of Spain have been exported, and which are nevertheless found not to degenerate.

The merinos of Spain have also been of late years dispersed through Sweden and Russia, and in almost all the countries of Europe, as well as to the United States of America, in all which, notwithstanding the varieties of climate, the fleece has preserved its character and quality without any change of pasture. The practice of living constantly in the open air, without doubt, contributes much to the cleanness of the wool and the health of the flock;

but neither to this circumstance, traslumacion, nor to climate, is the quality attributable, so much as to *la naturaleza y casta que les es propria*, their peculiar nature and character—as different trees produce different leaves and fruit. The experience of many centuries has proved that in Spain there is no degeneracy in the quality of the merino wool; particular attention is always paid by the shepherds to avoid marshy grounds, and whenever necessity may compel occasional use of stables, to keep them with the greatest cleanliness and well ventilated.

Exportation of merinos from Spain into different countries.—The earliest notices we find of the exportation of the merinos from Spain into England, are in the reigns of Edward III. and Henry VIII.—In 1792, the countess of Caompo Alange presented to his late majesty George III. through the agency of lord Auckland, five rams and thirty-five ewes, from her fine flock called Negrete. From this flock originated that of the duke of York, at the Oatlands The plan of introducing them into Sweden, which was first formed by the celebrated Christina, was not realized until 1723, by Altroemer, a Swede, who, after having travelled through Spain to collect information on pastoral subjects, introduced them into Sweden, where, notwithstanding the severity of the climate, they have greatly increased, and have also by judicious crosses, much improved the native flocks. The Danish government in 1797, procured in Spain, from the flocks of the Escurial, Guadalupe, Paular, Infantado, &c. three hundred head. In 1789, the Hollanders, Twen and Kuper, procured two rams and four ewes from Spain, to which were added in 1802, a flock of two hundred, which, with the increase of the former, were distributed among the proprietors of the native flocks, by a judicious intermixture with which these have been greatly improved, and the importation into Holland of foreign wool has been diminished.

Frederick of Prussia, in 1786, introduced into his dominions three hundred merinos from Spain, which he directed to be distributed among the native flocks of the country, and by which, particularly in Silesia, he has greatly improved the quality of the woolen manufactures in that province, where fine fabrics were before unknown.

In 1775, at the instance of Maria Teresa, some flocks were sent from Spain to Hungary, and afterwards in 1803 an agent was specially destined from Austria, to procure in addition three hundred of the best quality from Segovia and its vicinity, which have been found equally beneficial in that empire, where they have been also used to incorporate with the native flocks.

The Margrave of Anspach, besides importing into his states, in 1788 and 1790, some of the same family from Spain, founded an academy for practical and systematic instruction to the peasantry in their management, and to the manufacturers of woolen fabrics. From 1783, in Mecklenburgh, Lunenberg, Brunswick, Baden, and Hanover, indeed throughout the whole of Germany, the same system of improving the native flocks, by admixture with those from Spain, has been adopted.

In France, the great advantage to the native flocks, and the improvement of their woolen manufactures, is notorious, from the time of the flock of Rambouillet, which was first established, and whence they were distributed through the whole kingdom. The distinguished member of the National Institute, Gilbert, made repeated journeys into Spain, to procure flocks of the first quality, and died in the village of Sigueruela, district of Sepulveda, in 1805, when he was most actively engaged in his useful undertaking. That government, indeed, has not since its first step in this great national object, ceased to prosecute it with unremitting diligence; and its writers now boast of having so completely succeeded, that the time is not distant when Spain will yield to her the advantages heretofore exclusively hers in fine wool, for which France paid such large annual sums. To this end was inserted a secret article in the treaty of Basil, negotiated by Napoleon with the Prince of Peace, ensuring annually to France, for five successive years, the privilege of importing from Spain 1,000 ewes and 100 merino rams.

The empress Catharine II. of Russia also promoted by premiums of honour and value, under the direction of the Academy of Petersburgh, the introduction and extension in her dominions, of the same flocks of Spain, the advantages of which in the district of Paulogrande and others, have been experienced since their first introduction in 1811.

But the greatest effects and advantages have been produced in Saxony, by the admixture of the Spanish merino flocks with the native sheep of the country. In the years 1767 and 1768, the first flocks were sent from Spain, and were in number about 1,000 under the direction of Andreas Moreno, an inhabitant of Vinuesa, near Soria, who remained two years in Saxony, for the purpose of superintending the flocks, and diffusing his knowledge of their proper management. Since that time, so great has been the increase and benefit to Saxony, that it not only produces all the fine wool consumed in the kingdom, but finds advantageous markets for its excess at the fairs of Leipsic, from which are supplied the cloth fabrics of Aix-la-Chapelle, Holland and Prussia, besides exporting in 1807 more than 50,000 Spanish arrobas of wool to England; since which time its value and export to England has greatly increased, and produces a competition injurious to the sale of Spanish wool. In 1767 and 1768, the same Andreas Moreno supplied to the Italian states some merino flocks, of whose distribution and benefits there does not appear any public documents; but in Piedmont there are abundant proofs of the benefits derived to the native flocks from their incorporation with 150 merinos, selected in 1787, from those of Segovia, under the direction of the count Graneri, ambassador from Turin to Spain in that year. The Academy of Agriculture, and some distinguished individuals there, superintended the management and distribution of this flock, from which, in a few years, their number was increased to about 5,000, of which one-third part was preserved pure from intermixture, and the remainder were incorporated with the native flocks of the ecclesiastical states.

Van Runen, in 1782, took from Spain to the Cape of Good Hope 400 merinos—and in 1804 or 1805, colonel Humphreys, minister from the United States to Portugal, sent a small flock to his country, where by the subsequent additions made by the late chancellor Livingston, by Mr. Meade, and numerous others, they have become naturalized.

CURING TOBACCO.

[The following remarks on the curing of tobacco may be of use to our subscribers in Ohio.—They are extracted from a private letter of a friend in North Carolina.]

From the remarks made in one of your letters respecting tobacco, you perhaps have mistaken my meaning on this matter; I will therefore very briefly state to you a *part* of our management of tobacco, premising at the same time, that I will hereafter enlarge these remarks and enter more into details, should you request it for publication.

Our tobacco is so large and heavy, that curing it by fire is indispensable to enable it to go through a sweat with safety. As a proof of this, the large western country tobacco (made in Kentucky and Tennessee) is complained loudly of in Europe; in going through a sweat it rots, for the plain reason that they do not fire it. We have houses for curing in, and larger barns to carry it to after it is cured. Our houses for firing are made very close, to confine the heat; after the tobacco is made yellow enough after cutting, which is done by warming the houses by small bark fires, it is then cured in about 48 hours, by log fires which are constantly kept up and attended to.

In stripping, only six leaves are tied in a bundle invariably. At this time it is assorted into three qualities—the two first qualities are tied in bundles—the third and lowest quality, which is termed ground leaves, is stemmed.

After stripping, the tobacco is then shook out and cleaned of dirt and grit, which is done in the following manner: a man takes as many bundles as he can in one hand, and as many in the other, and whips them against each other, which loosens and disengages the dirt, he then gives each handful a violent shake. After stripping, it is then bulked for giving it a set, viz. to make the bundles straight, close and nice. In bulking, only one bundle is put down at a time, and the bundles pass their whole length through the hands of the labourers, at which moment they are squeezed to compress them in a small compass. After bulking nicely, the tobacco is weighted to give it the desired set. After remaining in bulk awhile (it must not remain too long, particularly in warm weather, as it might heat, because the tobacco is at this time quite soft,) it is then hung up for the purpose of getting it in the right order for prising, which is the most difficult part of the business. We watch it, as I said before, because one hour might get it wrong. The order in which we strike down for prising is this—the stem must be so hard as to break freely two-thirds of its length, beginning at the bigger end, while the leaf at the same time is so soft as to bear stretching open to its full breadth; this is the order which will enable it to go through a sweat and to make it show to the best advantage in the market, and to be best handled by the consumer or manufacturer.

We always take the tobacco as it comes in order, and not as it goes out. When it is struck down for prising, it is bulked in the same careful and neat manner as before described, and well weighted. It ought now to remain in bulk at least four weeks; but the longer the better, as it will, when managed in this way, daily improve in smell and appearance. When taken up for prising, it has a smell more fragrant and delightful than any herb in the world. It is truly "sweet scented," an epithet always attached in Europe to good tobacco.

In prising we use the same particularity—only one bundle is put in at a time, and that by a certain rule. This is to make it break nice and look well when uncased—all the heads of the bundles are pointing outwards, and jut against the staves of the hogshead.

We never top our tobacco to more than ten leaves, the ends of the top leaves frequently hang over the others and touch the ground.

It is true that the great body of the planters do not manage their tobacco in this neat and careful manner; but those who do, get amply rewarded for their care and pains; and when once they get their names up for superior management, they always obtain the very best prices in market. And when we consider that tobacco is a cash article, and that it exhibits good or bad management more than any plant in the world, we should not spare any pains in its cultivation and after management.

INDIAN CORN,

Singular facts in regard to—ascertained by experiment.

Edisto Island, S. C., March 20, 1825.

Dear Sir,

Having somewhere read, that seed selected from the point, or small end of melons, cucumbers and pumpkins, would exhibit a greater increase than if taken from the middle or but-end, I tried the following experiment the last season, on corn; which, though not sufficiently conclusive, should yet lead to farther inquiry and examination. In the centre of my field there were two pieces of ground, (not adapted to cotton.) each 105 feet square, which were divided, and planted with seed from the point, middle and but-end, according to the following diagram:

Task—No. 1.	*Task—No. 2.*
POINT	BUT-END
MIDDLE	MIDDLE
BUT-END	POINT

When the corn was harvested, the product was as follows, viz· Task No. 1, point, 3 pecks; middle, 1 peck and 4 quarts; but end, 2 pecks. Task No. 2, point, 2 pecks and 4 quarts; middle, 1 peck and 3 quarts; but-end, 2 pecks. Both tasks were planted at the same time, cultivated in the same manner, and I am not aware that there existed a difference of soil.

The average crop would have been much greater, had not the season been so peculiarly unpropitious to the husbandman. In the months of June, July and August the drought was unusually severe, and portended the most disastrous consequences. A flood of rain succeeded in September, and fields which had previously exhibited a parched and meagre appearance, were now literally inundated.

To the theorist, and him who is emulous of penetrating the arcana of nature, I submit the solution of the problem which the above facts present.

Very respectfully, your obed't servant,

W. B SEABROOK.

PENNSYLVANIA AGRICULTURAL SOCIETY.

The Society met on Saturday, the 9th inst. in the hall over the Athenæum, in Philadelphia, in conformity with an amendment of their By-laws.

The following communications and letters were presented and referred to the committee:

From Major Rudd, of Martin Lodge, (Eng.) acknowledging the receipt of the society's "Memoirs," and detailing his experience of the ill effects of soiling, the evils of breeding in, the advantages to be derived from the use of mangel wurtzel, as "a most valuable and nutritious food for cattle," his objections to the mistakes of many of "the ablest writers on agriculture, as theoretical, and not good practical farmers," their errors in "recommending salt as a manure, which, after having been tried by himself, and by others, on various soils, and in various quantities, had not produced the least benefit," &c.

From Charles Champion, of Blyth, (Eng.) dated Jan. 7th, on the late contests among the breeders of Hereford and Improved Short Horn cattle, at the great shows in London, and at Tredegar, in Wales; and stating, that the quarters of the marquis of Exeter's prize Steer, 2 years 11 months old, weighed 1456 pounds; that lord Althorp's Steer, two months younger, weighed 1274 pounds of beef, of the finest kind, both of pure Improved Durham Short Horn blood—accompanied by the official account, showing, that his Improved Short Horn heifer, *Points*, gave him a second victory over the Herefords, taking the sweepstakes, where the best animals of various breeds were brought into competition, after a year's preparation.

From Mr. W——, of Burley, Yorkshire, to the corresponding secretary, acknowledging the receipt of the "Memoirs," and saying, "I am happy to confirm your opinions of Improved Short Horns. I am largely concerned in the cotton business, and having to provide milk for a large establishment in 1810, I attended Mr. Charles Colling's sale," &c. "I should prefer a cow yielding about 3 gallons a meal, ale measure, equal to about 30 quarts wine measure daily, to one giving more," &c.; objecting to the practice of soiling, as he had "found for years, that two cows ranging over the pastures, give as much milk as three confined in the house, and that young ones are more healthy and of better growth, when allowed to run at large;" and presenting a scale and measuring tape, by means of which, certain designated dimensions being given of cattle, when fat, their dead weight can be ascertained, with great precision.

From Charles Champion, Esq. dated Feb. 14, in reply to an order for Improved Short Horns. It is inquired "whether I think it possible for Mr. ——'s Short Horn cows to give 30 quarts of milk daily. I can assure you, I have no doubt of it, as I have known several instances of Improved Short Horn cows giving larger quantities."

From the corresponding secretary of the Agricultural Society at Vevay, Indiana, asking information on the culture of the vine, &c.

From Richard K. Meade, Esq. of Frederick county, Va. to the corresponding secretary, inquiring "in behalf of the Valley Society, the price of Improved Short Horns, their weight when dropped, when one month, and six months old; their general weight, the increase at intervals of six and twelve months, their care and keep from first to last, the most profitable age to fit them for the butcher, and then their general weight; and asking information upon "different breeds, as to beef, milk, work oxen," &c. communicating his objects, the measurement and weight of his cattle, their management and food.

The replies to these various questions, embracing necessarily the whole system of managing and breeding certain races of neat cattle, as well as distinguishing their properties.

A letter from James Cox, Esq. of Buck's county, giving his experience of Improved Short Horns, as good milkers and quick feeders.

From Mr. Kersey, on improved breeds of neat cattle and sheep, the excellence of Dishley and Tunisian sheep when crossed by native breeds; on the early maturity of Improved Short Horns; the remarkable weight of an half-bred Improved Short Horn calf, six months old, bred by Mr. Robt. Clemmens, the quarters of which weighed 334 pounds in the market; on the extraordinary quantity of rich milk afforded by one of Mr. Powel's imported cows, a year after her calf had been produced.

From Mr. Comfort, on the quantity of milk given by an imported cow at Powelton, in addition to the consumption of her healthy calf running at her side, supposed by him to be equal to about 8 quarts at a meal.

From a gentleman in one of the middle counties of Pennsylvania, after nearly a year's experience, declaring his entire approbation of the Improved Short Horns, stating "in the summer I purchased a very handsome well formed heifer from a neighbouring farmer, of the same age with the Improved Short Horn heifer; I have kept them together, and they have satisfied our farmers of the astonishing difference between the improved stock and our native breeds of the best kind. With the same keeping, the size and weight of the Short Horn heifer are double that of the other. The bull promises to be a splendid animal, and besides our own use, he will soon pay costs."

From Mr. Alburger, an extensive grazier on certain cattle.

From Mr. Wm. Bradley, a dairy farmer and grazier, approving highly of Improved Short Horns for the dairy.

From James Williams, Esq. of Hilton, presenting some very fine ruta baga, drilled so late as the 27th July, between carrots. The roots had been deposited in a cellar, where they have continued in a state of perfect preservation.

From John Hare Powel, Esq. on the advantages of protecting the soil as much as practicable during the summer, illustrated by his experiments in the two last seasons, upon nearly ninety acres of fine alluvion, which, after being early mown, was not depastured until the latter part of the autumn.

On the superior effects of recent manure in comparison with those of rotted dung, ascertained by repeated experiments upon large fields.

On the use of oyster shell lime and the economical mode of obtaining it.

On the family of Tunisian mountain sheep presented by Col. Pickering to Judge Peters—their advantages in fleece, form and properties over those which have been recently imported, and his success in obtaining a valuable cross from the union of the Bakewell mixed breed with the variety obtained by Mr. Bones from Col. Pickering's Tunisian sheep and Jeffery's importation of Irish blood.

Reuben Haines, Esq. communicated a valuable accession to his piggery by a present from Mr. Hayward, in England, from whose stock Mr. Haines' fine swine had been originally obtained.

Mr. Kersey sent for the inspection of the society an ingenious contrivance by which a dog may be made to work a churn or grindstone.

Mr. Powel presented some oats, taken in the presence of himself and the recording secretary, from the stomach of an imported heifer, which had died in consequence of having eaten too largely of unground oats just before leaving the ship, and being allowed free access to water immediately on landing. The animal had been buried thirteen months under a mound of manure covered closely with clay—the oats exhibited the fresh and bright appearance of those recently reaped. They were produced to enforce the belief that unground oats when consumed without hay or straw by neat cattle, are very difficult of digestion and highly injurious.

Mr. Hoopes sent to the society's room an improved Blockley Cultivator.

Mr. Barnard sent a neat expanding Harrow, enabling the farmer to regulate the distance of the tines.

Extract from the minutes,

JOHN P. MILNOR,
Recording Sec'ry.

ORCHARD GRASS.

Inquiry as to the time of its seeding—time for sowing it, &c.

Scotland Neck, 2d April, 1825.

Mr. Skinner,

Several persons in this neighbourhood have in their gardens small patches of what they believe to be the *orchard grass.* Will you get some person who is well acquainted with it, to give a particular description of it—the time it seeds, and when is the proper time to sow it.

Respectfully, yours,

WM. R. SMITH.

[The above was referred to a friend, who was known to be a very successful cultivator of Orchard Grass, and on whose farm the Editor had recently seen the best lot of grass which has attracted his notice this spring. He has kindly favoured us with the following answer—the accuracy of which may be fully relied on, as would be better known, if he had consented to give his name.]

So much has already been published in the American Farmer upon the excellent qualities of Orchard Grass, that it would be presumptuous in a *petty farmer*, like myself, to give any additional information thereon; but from your flattering request, I cheerfully state the experience I have had, as to sowing and reaping upon my small farm.

It will answer to sow orchard grass either in the spring or fall; and if the former season is found most convenient, it may be done upon any growing crop of grain, and the earlier the better, if the ground be sufficiently dry; after which harrow, with a very light harrow, or roll—either, or both operations, will rather benefit than injure the grain crop. But if the ground is poor, a top dressing of manure will be requisite immediately after sowing. You cannot have a crop of grass to mow the first year, if sown in the spring; and indeed it will be better for the grass if not pastured during that year, except by calves, which would not injure it.

If ground is prepared for sowing in the fall, the earlier this object is accomplished the better; for if it does not take good root and cover the ground well before winter, the frost will be very apt to turn the plant out of the ground—which I one year experienced in sowing after potatoes in the month of November; for although the grass came up handsomely, there was none left in the spring, and I then sowed a second time.

Last year I had a poor field, which bore very light crops of English grass; it was ploughed in the spring and sown in May with millet, which came up very slightly, and was ploughed *in*, the last of June, and the ground immediately sown with buckwheat, upon which, when in blossom, I spread a light coat of manure, and again ploughed and harrowed: the soil was very finely pulverized, and on the 4th August I sowed orchard grass seed, which came up beautifully without a weed appearing; before December it was six inches high, and is now a very luxuriant crop, and will, I make no doubt, produce between two and three tons to the acre this summer.

Two years since, I ploughed a field of mixed worn out grasses in the month of November; let it lay all winter, and in the spring top-dressed with old stable manure, and without stirring the earth, sowed oats, which were well harrowed *in*, and then orchard grass sown, and the whole rolled, making the surface very fine—the manure caused the oats to grow so luxuriantly, I was fearful the grass would be smothered; but after reaping them I was agreeably surprised to find as fine a coat of grass as could be desired, and which continues to produce abundant crops without any of the previous mixed grasses appearing, although the ground was only ploughed once.

Five years since I sowed orchard grass with turnips in the month of August, and it came up remarkably well. The field has not since then been manured, and the crops of hay are very good and clean. I always sow two bushels of orchard grass seed to the acre, or as nearly so as can be ascertained; this quantity is by some farmers deemed too much, but I am satisfied of the contrary, for it cannot well be too thick; and if a smaller quantity is sown, it does not cover the ground, but grows into large tussucks, supposed by many to be its natural propensity, but occasioned in fact from being too thinly sown. The seed being remarkably light, requires a calm day and great nicety in laying off the ground. You cannot well make a *cast* of more than four feet; therefore I have three stakes made, four feet each, and plant them in a row, to guide the sowing, and take a boy to remove the stakes, measuring the distance by their own length; and having sown the field in one direction, I always cross sow it in the same manner. But Mr. Sinclair has an excellent machine upon one wheel and moved by one man, which will sow 12 feet in breadth at one time, and very accurately, although it also requires a cross sowing for two bushels to the acre. If two quarts of red clover seed is added to each acre, it makes an addition to the hay which by many is much preferred, and I think it an improvement, more particularly as they are in season to cut at the same time.

Orchard grass is a very early, as also a late grass, and ought to be cut for hay while in blossom; if suffered to grow longer, it becomes harsh and coarse. Last spring was rather a late one, and on reference to my diary, I find we commenced mowing on the 8th June, and finished upwards of 40 tons on the 20th; and from the same source I find that we reaped with sickles that which was left for seed on the 5th July, when it was quite ripe. I particularly recommend every farmer to save his own seed, and by cutting off the head with a sickle it is preserved pure and free from many noxious weeds, which will generally be found in that purchased indiscriminately from the stores.

From experience, I am well satisfied that orchard grass, when cut in proper season, makes the best of hay. It is easily produced, continues in its pure state longer than any grass with which I am acquainted, and after producing a heavy crop of hay, it affords the best of pasture until christmas, without apparently injuring the succeeding crop; it also continues growing in our driest seasons, when other grasses droop or die; hence I consider myself justified in giving this flattering description, and which I hope may be useful to your readers.

April, 10th, 1825.

MOLES AND CUT WORMS.

I wish to ascertain through the medium of your valuable journal, the most *expeditious* and most *effectual* method, of destroying the *moles* from our gardens. An insect, here called the *cut worm*, is very destructive to young corn. If you, or any of your numerous correspondents, can suggest a remedy for their ravages, you or they would confer a considerable favour.

I would only add the inquiry—what *quality* gives to the different species of wood their various degrees of durability?*

Yours, most respectfully,

A BACK-WOODS SUBSCRIBER.

HORTICULTURE.

VINES.

RAISING FROM THE SEED—NOT APPROVED.

State of Delaware, April 9, 1825.

John S. Skinner, Esq.

Sir,—Having planted a vineyard to the extent of six acres, I feel much interest in the communication made by Mr. Bosley, in your paper of the 25th of last month, in which he says, "the vine raised from the seed will last 100 years, while those from the slip will last only 10 to 12 years." Now I propose to contest this declaration, by respectfully suggesting a few ideas contrary to his opinion. There can be no better mode of doing this than by reference to what experience teaches on the subject. I assert that I planted cuttings of vines more than 20 years ago, and that they are now in a thrifty, flourishing condition, and on as level a piece of land as any in this country. There are other vines within my knowledge, now in a thrifty state, and which, as I am credibly informed, were *cuttings* planted more than 20 years ago, and being situate upon as flat land as that upon which mine are planted, of course they are as liable to decline from this, the chief cause, as I conceive, if not the only natural cause, of the early decline of the vine.

It is of much importance that Mr. Bosley's idea of the early decline of the vine from cuttings should be controverted: the sooner the better—for an early opposition to a misconception upon any important subject will oftentimes elicit facts, which may prove of value to persons about to engage in any untried project. If this idea of Mr. Bosley should prove to be better founded than I believe it to be, it will tend very much to retard the spirit now operating in favour of the cultivation of the vine in this country—because if we must resort to the seed to have permanent and durable vineyards, it will throw us "all aback," to use the seaman's phrase, as it will produce, as many varieties of its kind, as would the seed apple, the pear, or the potato, respectively, when sown.

If we can believe what the books on the subject of the vine say, as to raising vines from seed, we cannot raise more than one fifth of grape-bearing vines from any given quantity of seed sown, and those not of the exact kind sought for; besides many years must elapse before the kind or quality could be known. From my reading on the subject of the vine, I am led to believe that its varieties are infinite, as are those of the apple, the pear, or the potato—while its species, like theirs, are limitted and fixed to a certain number. After all that can be said on this subject, let not the young vigneron despond, for there is another, and I might almost say, an equivalent mode to cuttings or slips, for the continuance of such kinds of vines as he may desire; the mode I mean is by *layer*. This mode by layer will give a perpetual duration to the kinds of vines he may or will have selected for his vineyard. If the mode by slips or cuttings should fail, of which I have not the most remote idea, to the layer then let us look as to our final hope and dependence, rather than to the vines raised from the seed; and although the mode by layer is more tedious and diversified than that of cuttings, yet it is more certain of a profitable result than the raising vines from the seed.

The foregoing sentiments are the offspring of a few moments of leisure: if there is no objection, and I presume there can be none, I would be glad to see them inserted in your useful paper. I

THE HOLLY FOR HEDGES.

Extract of a letter from Col. T. Emory.

The holly makes a close and beautiful winter hedge, and no plant bears the shears better.—I have a short hedge of about 60 yards in length in my garden, that is very pretty when kept in order, and affords an excellent shelter from the north west winds for two or three squares.

I have not propagated any from the seed, and know not whether, like the thorn seed, they require mulching to bring them up. If they do, I apprehend scalding water used on them, or on the seed of the thorn, would be not only the most expeditious, but probably as good a mode as any to swell the hard rind that encloses the kernel, and cause the germ to shoot. This method I have tried with the hard seed of the locust, with abundant success, and have also extended that plan to old and dry walnuts and hickorynuts, and the buckeye, or horse chestnut, with equal success. One thing must not be omitted—As the germ by this means is *pushed*, the seed, when taken from the water, must be immediately covered in moist earth, which must not be suffered to get *dry till the seedlings rise.*

[Those who have witnessed the exertions, as well as the success which has attended them, of the gentleman to whom the following paragraph alludes, will join their commendations to those of the writer.]

From Noah's National Advocate.

Jesse Buel, Esq., of Albany, has been elected a corresponding member of the Horticultural Society of London. We are pleased to find this gentleman so honourably rewarded for his persevering and successful exertions in this useful branch of science.—Mr. Buel's devotion to agricultural and horticultural pursuits, has rendered him one of their most important auxiliaries in our country His report to the state legislature, when a member in 1823, on an agricultural school and experimental and pattern farm, is replete with sound argument, practical observations, and ingenious deductions. He has added to our choice of fruits in the last year, several of Knight's new varieties, by importing them from London, and has this year received, we understand, more than fifty new varieties from the London Horticultural Society. Mr. Buel's farm and garden lie about two miles from the city of Albany, on the great western turnpike; a spot on which was not a foot of ground cultivated seven years ago. It has now become the resort of taste and science, and richly rewards their votaries, who visit this hospitable retreat.

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* This is, indeed, an important problem. We will see if the books contain any thing on this particular subject, and will thank our correspondents, if they meet with any thing satisfactory in regard to it, in the course of their reading, to point us to it.—*Ed.*

RURAL ECONOMY.

THE CULTIVATION OF THE WHITE MULBERRY AND THE RAISING OF SILK WORMS,

Recommended as very profitable in the United States.

About five years ago, Wm. Gillespie, Esq. of the town of Montgomery, Orange county, (N .Y.) sowed seed for a nursery of the white mulberry (*morus alba*) for the purpose of the culture of the silk worm. The ground occupied by the nursery is about four square rods. This small lot yielded, last summer, 175 skeins of sewing silk, rivalling in softness, strength, and beauty, the best imported specimens of the same article. These skeins with a sufficient quantity of tow for a pair of stockings, would command in market $10. The whole labour expended in the culture, Mr. Gillespie estimates at $2—making the produce of four square rods $8. One acre cultivated in the same way would yield $320, besides the expense of the labour.

Farmers might clothe their wives and daughters in silks of good quality at less expense than it now requires to clothe them in fine cottons. It is estimated that $5,000 worth of sewing silk is sold annually in Orange county alone, and the whole sales of the article in the state of New York may probably be estimated at $150,000. All this would be saved to our country by the extension of this very profitable branch of husbandry so as to supply the home consumption. Much of the labour, too, can be performed by small children, who would otherwise be idle, and thus early habits of industry would be created.

The whole process is simple, and a knowledge of it easily acquired. After the middle of May, the egg of the silk worm is brought from the bureau, and exposed to the warmth of the air, but not to the rays of the sun. Early in June, the term of incubation expires, and the small silk worms make their appearance. They are now to be fed by mulberry leaves with which they are supplied twice a day—the leaves to be scattered in the enclosure where they are kept. In about six weeks they attain their full growth, when they are of a beautiful golden colour. A small quantity of leaves supplies them for the first five weeks; the sixth week, they require an abundant supply. Mr. Gillespie informs us, that during this week, when a stranger visits their apartment, they leave off eating, raise their horns, and give plain indications that they know him to be strange.

After feeding about six weeks they quit eating and are prepared to commence spinning. Oak or walnut leaves, dried in the sun so as to be curled, are now thrown into their enclosure: they lodge in the folds of the leaf and begin to spin from their own bowels—first the tow by which they attach their web to the leaf, then the thread, which they form into a solid web, so as to shut themselves closely within.

The larvæ, or worms enclosed in the balls, that are intended for propagation, cut their way out of the silken cell, and escape from their own prison, in the form of a butterfly, with beautiful variegated wings. White paper is placed under them, on which the egg is deposited. One butterfly will deposite 2000 eggs. These papers with the eggs, are laid away in a chest or desk, until the following spring, when the process described above is again repeated. "O Lord, how manifold are thy works! in wisdom hast thou made them all: the earth is full of thy riches."[*]

After this interesting insect has furnished the fine material, the tow is picked off the balls, which are thrown into hot water, and a stick is passed among them, to which the ends of the threads attach themselves. For sewing silk, forty of them are laid together and reeled. The thread, thus composed of forty fibres, is twisted hard on a large spinning-wheel, then doubled and twisted again, and wrought into skeins. The whole process of manufacture is completed by scouring in the same manner as woollen yarn, to detach the glutinous substance, which the worm employs in the fabrication of its thread.

It must be remarked, that the black mulberry, (*morus nigra,*) a native of the United States, will not answer the purpose so well. The silk manufactured from its leaf is said to be of a very inferior quality.

Mr. Gillespie had a premium of $8 awarded him at the anniversary of the Agricultural Society of Orange county, 1822.

The Legislature of New York have offered a premium for the planting of white mulberry trees.

Specimens of the ball, the tow, and the sewing silk, have been deposited with the editor of the Evangelical Witness, who will take pleasure in showing them to any of his friends who may have the curiosity to examine them. [*Evang. Witness.*

PLANTATION GRIST MILLS.

Sir,—It was with great pleasure I read a communication on the score of Plantation Grist Mills, in a recent Farmer. They are really much wanted, and I hope that some of the Philadelphia iron-masters will see to the affair, and by uniting the saw mill, the grist mill and cotton gin, (for I apprehend it could be all done with one *principal* wheel,) achieve the desired end. A gentleman in this vicinity has a mill with cast iron cogs fitted for a grist mill and cotton gin. It works well with two wheels, and gives him 20 barrels of meal in the day.

The most desirable thing would be a drawing and wood cut, with scale and bill of timber, &c. &c.

AMPHICON.

S. Carolina, April 7, 1825.

ENGLISH WALNUTS

GOOD FOR FATTENING TURKIES.

From a highly respectable Officer of the Navy.

When in Barcelona, I learnt from a gentleman there, that the usual way of fattening turkies, was by feeding them with English walnuts, unbroken. I tried the experiment, afterwards on several, with entire success—giving one the first day, two the second, and three the third; never exceeding the latter quantity. They are often given, however, as many as six walnuts a day, and ought to have no other kind of food while fattening in this way. I examined the craws of several, and found the walnuts which had been given them the day previous to their being killed, almost entirely digested. The walnuts must be forced down the throat, which is not so difficult as may be imagined. The time necessary to fatten them, I believe, does not exceed ten days.

INTERNAL IMPROVEMENTS.

TO THE EDITOR OF THE AMERICAN FARMER.

Newport, Campbell county, Ky. April 2, 1825.

Dear Sir,

The obligations I am under to Ohio and Kentucky do not at all abate that ardour I have long experienced for the prosperity of other states in the west; I mean Illinois and Indiana. Though the youngest, they are not the least deserving. If their *internal resources* do not permit them at this time to compete with the state of Ohio in so laudable an enterprise, they have been casting their thoughts around them, but not as idle spectators. They are looking *ahead*, and are also disposed to meet future events. Possessing, most unquestionably, all the *natural* advantages of connecting the waters of the lakes with those of the Ohio, for two or three years past their plans have been devised for the accomplishment of this object. This will be the connection of the two navigable points of the Maume and Wabash rivers. To meet this event, the legislature of Illinois have already incorporated a company for the purpose, by an act passed 13th Jan. 1825. Seeing that the policy pursued by the legislatures of New York and Ohio had excluded individual enterprise from their system of canalling; that their resources at this time being inadequate, they have found this channel open, and invited capitalists to participate in the benefits resulting from such an enterprize.

The act of incorporation to which I have referred, as far as the state of Illinois embraces the Wabash river, has invested in a navigation company, the capital stock of 10,000 shares of $100 each, (one million,) with power to enter upon any land in or adjoining the Wabash river belonging to the people or inhabitants of said state, so far as may be necessary for opening a canal around the several *falls,* or lowering the channels of the same; and also to cut dams, and locks, aqueducts, and other works, for the improvement of said navigation; and all such lands, on being appraised and paid for, to become the property of the company. This company is also authorized to open a lock and canal navigation around all such rapids and other places on said river, and to dam the same for that purpose, &c.

It may be worthy of remark that the bed of this river, for about 400 miles, forms a *natural* canal; that there are some falls well calculated for *water works,* which in this country is exceedingly valuable, and requires but moderate capital to improve the whole to the portage point, near fort Wayne; perhaps 60 or $100,000 would do it.

This act of incorporation runs for thirty years, and then not to be dissolved but by paying to the company the amount of capital which they have actually expended, together with ten per cent interest per annum thereon, &c. It also provides for the state of Indiana joining in said act. This was pending in the legislature of Indiana, and postponed until the next session, with a view of obtaining from Congress the land route between Maume and Wabash rivers, which lies altogether in Indiana. This grant they have, I presume, obtained. However, the Illinois charter, even exclusive of this, an honourable Judge writes me, "is the best in the world!" But Indiana will, no doubt, co-operate and give it efficiency.

The directors of this company, under this excellent charter, (which is now before me,) will, I expect, open books for the subscription in the cities of the eastern states. No payments will be required until actual operations have commenced.

I am, dear sir, your obed't servant,

Niles' R. Nat. Int.] TH. S. HINDE.

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[*] Psalm civ. 24.

CHESAPEAKE AND DELAWARE CANAL.

This magnificent work is now rapidly progressing, and will, in all probability, be entirely completed in the year 1827. It is 14 miles in length, 60 feet wide, and 8 feet deep; it has two tide and two lift locks, which are in length between the gates 100 feet by 22 feet wide; the walls are 140 feet long. It will at once be seen that this canal will admit sloops and schooners of a large class.

At the summit level, where the cutting is about 70 feet deep, there will be a bridge with a single arch of 200 or 250 feet space; the under side of the arch to be 90 feet above the bottom of the canal.

Extract of a Letter from the vicinity of the Chesapeake and Delaware Canal, dated March 25, 1825.

"We hope soon to have our number of men increased to two thousand on this Canal—but we fear the article of beef and other provisions, will be very high before next autumn. It appears as though the drovers would soon drain the country of cattle to drive to New-York, Philadelphia, and Baltimore, where, we are informed, they are selling at great sacrifices. It would be much better for farmers to slaughter their own fat cattle, and salt them up. I shall be very much mistaken, if beef does not command double in price before next August. It has already advanced with us. The labourers on the different canals in New-York, Pennsylvania, and Maryland, will soon consume from thirty to fifty head of fat bullocks per day. The number of workmen on the different canals now exceed ten thousand. Good salt beef is worth twelve dollars per barrel."

[*Franklin Gazette*.

UNION CANAL.

The bill authorizing the extension of the Union Canal eastward from the mouth of the Tulpehocken, so as to unite with the Schuylkill Canal, at or near Reading, has passed both branches of the Legislature, and received the signatures of the Governor. It is understood that the company will thus be enabled at once to finish and put into operation, the whole of the line east of Lebanon, comprising a distance of 35 miles, and forming in connexion with the Schuylkill works, a complete water communication from this city to that place—and that this most desirable object will probably be accomplished by the end of August next. . The residue of the work, stretching on the one hand to the coal regions of the Swatara, and on the other to the Susquehanna at Middletown will also be prosecuted with the utmost vigour during the present season.

UNION CANAL LOAN.—The whole of the loan of $200,000, authorized by the Union Canal Company in Pennsylvania, was taken on the 7th inst. at a premium of 4 per cent. As high as 7 1-2 and even 10 per cent was offered for a considerable portion of the loan; but the managers were obliged, by the terms of their proposals to place the highest bid on a footing with the lowest accepted offer; and it was rated at 104. It has since been sold at 106 per cent. The interest is payable quarterly.

OHIO LOAN.—The Commissioners of the Ohio canal fund received, as we learn, many offers for the loan of $400,000, for which they had advertised, and effected it, as we are further told, at 97 1-2 for 100 of stock, bearing an interest of 5 per cent.—This is equal to a premium of about 13 per cent. on 6 per cent. stock. The highest offer for 6 per cent. stock was, we are informed, 110 per cent.—The persons to whom the loan was awarded are, Messrs. Eleazar Lord, and John Rathbone, jun.

MISCELLANEOUS.

ORNITHOLOGY.

HABITS OF THE WOODCOCK.

Cæcil County, Md. April 10, 1825.

DEAR SIR: In your last paper, I observed a report of the season, from Stephenstown, Rensellaer county, New-York, to evidence the forwardness of the season, that "even the night-bird who screeches to us in May, is now amongst us, high in the air at evening." Your correspondent labours under a mistake, when he supposes the notes of a bird which he hears at twilight in the evening, to be the night-bird, or whippoorwill. I do not wonder at the mistake, because I have known it frequently made. The bird which he takes for the *night-bird*, is the woodcock, who always commence their songs in the beginning of March. They fly high in the air—are seldom seen when they commence first their flight. The note resembles that of the night-bird, but by stricter attention, you will observe, they soon leave this hackney song for one of greater melody—indeed, one of the finest I ever heard. The whip poorwill never comes until the weather has become settled, and 'tis a saying among farmers, when this bird comes, you may plant corn.

Your friend,
BENJ. F. MACKALL.

Distressing as were the effects of the inundations at St. Petersburgh, where 580 persons perished, they were not as destructive as those in Hanover, as to the loss of property. The inundations covered an extent of twelve square leagues between Harbourg Rit Zebottel and Bremen About 7000 houses were under water, and more than 200 persons perished.

NOTES OF A DESULTORY READER.

Communicated for the American Farmer.

In the city of Philadelphia, during twelve months prior to the 1st January last, there were 4,399 deaths—of these 324 died of *natural small pox.*—50 of apoplexy!—151 of inflammation of the lungs—379 of consumption—and 307 of typhus fever. Of the above-mentioned deaths, there were,

Males of 20 years and upwards, . .	1017	
Males under 20 years, ...	1303	
		2320
Females of 20 years and upwards, .	1076	
Females under 20 years, ...	919	
		1995
Children, principally under one year, whose sex is unknown, ...		84
Total.		4399

Of the foregoing deaths, 590 died in the Almshouse, and 703 were people of colour.

In a statement of deaths in Baltimore, for the year ending 1st Jan. 1825, prepared for the Philadelphia Freeman's Journal, it is set forth that the total of deaths were 1468, of which two only died of natural small pox—17 of apoplexy—188 of consumption—2 of inflammation of the lungs, and 17 of typhus fever.

It is further stated, that of the deaths in Baltimore, 416 were coloured people, of whom 368 were free and 48 slaves. This is correct, but the following N. B. is so far false only as the facts stated are the reverse of the truth.

N. B. The coloured population of this city, in 1820, according to the United States census, was—Free 4,357, Slaves 10,294.

This error was derived from some Baltimore publication. The state of the case as to free and slave coloured population in 1820, was as follows. I state it on authority:

Whole population of Baltimore in 1820—		62,738
FREE COLOURED PERSONS, MALES.		
Under 14 years of age, ...	1,663	
Of 14 and under 26, ...	903	
Of 26 to 45, ...	1,110	
Of 45 and upwards, ...	687	
Free males, ...		4,363
FEMALES.		
Under 14 years of age, ...	1,827	
Of 14 and under 26, ...	1,606	
Of 26 to 45, ...	1,674	
Of 45 and upwards, ...	756	
Free Females, ...		5,868
Free coloured persons, ...		10,226
MALE SLAVES.		
Under 14 years of age, ...	787	
Of 14 and under 26, ...	595	
Of 26 to 45, ...	421	
Of 45 and upwards, ...	165	
Male slaves, ...		1,968
FEMALE SLAVES.		
Under 14 years of age, ...	790	
Of 14 and under 26, ...	862	
Of 26 to 45, ...	511	
Of 45 and upwards, ...	226	
Female slaves, ...		2,389
Slave coloured persons, ...		4,357
Total coloured persons, . . .		14,583

How striking is the disproportion between the deaths of free and slave coloured people—while the population of free is not more than 2⅓ to one slave, the deaths are as more than seven for one—proving how vastly superior is the condition of the slaves in all that contributes to comfort, health, and the prolongation of life. Nothing can be more conducive to human increase than the circumstances of modern slavery, as these circumstances have for some time existed in the middle, and as they are rapidly extending through all the southern states—where inhumanity has become reproachful, if not anomalous.

ORIGIN AND PHILOSOPHY OF THE DRILL SYSTEM OF HUSBANDRY.

The drill system originated with Tull, who, having conceived a theory, which induced him to suppose that the beneficial effect of manure consisted, principally, in its rendering the particles of the earth so friable and minutely divisible as to admit of their being absorbed by the roots of plants, imagined this state of pulverization might be equally induced by the mechanical division of the soil, and which, he conceived, would be effected by more frequent ploughings, and other means of well stirring the earth, as well after as before the seed is sown. To accomplish this, he deposited the seed in parallel lines, at such a distance as allowed the intermediate space to be ploughed, or otherwise turned over, during the growth of the crops. His theory proved untrue, but his practice was excellent, for not only were the weeds more effectually destroyed than by any system of hand-hoeing before in use, but the growth of the plants was much accelerated and perfected. This was, however, obviously effected on a principle very different to his theory; not by the absorption of the divided particles of the earth itself, but by the absorption of the different principles which the earth never fails to evolve, or attract from the atmosphere, in a more than ordinary degree, every time it is turned over and well stirred, as water, caloric, several gases, and other principles detected and defined by modern chemistry; and which absorption was also evidently greatly increased by the multiplication of the roots of the plants, necessarily produced by their being occasionally divided, in these processes, by the plough or horse hoe. The quick and more perfect vegetation of grain, when deposited immediately after the land has been stirred by the plough, is a well known confirmation of this general principle.

The mechanism of this system included different implements for sowing the seed, earthing up the plants, cleaning and stirring the soil; and as the first and principal process consisted in depositing the grain, and was effected by an apparatus worked by horses, and constructed so as to drop the seed regularly in lines, which were drawn or drilled, it was called a drill machine, and the process acquired the name of drilling.

To the early adoption of this system, its gradual developement, and extended application, the Holkham agriculture owes much of its excellence, and particularly its extraordinary improvement in the culture of the Swedish turnip, bringing with it the beneficial consequences of a more perfected process of cleaning and stirring the land, of an increase of stock, and of a greater accumulation of manure.

SPANISH PROVERBS.

A handful of mother wit is worth a bushel of learning

A pound of care will not pay an ounce of debt.

A wise man changes his mind, a fool never will.

You had better leave your enemy something when you die, than live to beg of your friends.

That's wise delay, that makes the road safe.

The *foot* of the owner is the best *manure* for his land.

He is my friend, who grinds at my mill.

Enjoy that little you have while the fool is hunting for more.

Western Products.—The following is the amount of Live Stock which, in the year 1824, passed the Cumberland Ford for an Eastern Market:

Horses and Mules, ...	4,005
Hogs, 105 droves, ...	58,011
Good Beef Steers, ...	412
Probable value of Horses, &c. .	$360,450
Do. do. Hogs, . . .	406,077
Do. do. Cattle, ...	16,680
Total value	$783,207

Besides the above, a considerable number of droves are said to have gone the Kenhawa route.

Useful Rules for certain kinds of Housewives.

1. When you arise in the morning never be particular about pinning your clothes so very nicely; you can do that at any time.

2. Never comb your hair, or take off your cap until after breakfast. It is your business to take time by the foretop, and not let him take you so; therefore keep all tight in that quarter till 10 o'clock at least.

3. When you begin the business of your toilet, you may do it before the window or in the front entry; but the most proper place is in the kitchen.

4. Never have any particular place for any thing in your house; and then you may rest assured that nothing will ever be out of place; and that is a great comfort in a family.

5. Never follow the barbarous practice of brushing down cobwebs. A man's house is his castle; and so is a spider's. It is a violation of right, and a shameless disrespect to the fine arts.

6. Never teach your daughters to make or mend any of their own clothes; it is taking the bread from the mouth of the labourer; besides, it will make them crooked and give them sore fingers.

7. Never spoil a joke for a relation's sake; nor suppress the truth for any body's sake. Therefore, if you do not like your husband as well as you ought, out with it, and convince him you are no respecter of persons.

8. You should endeavour not to keep your temper—let it off as soon and as fast as you can; and you will then be as calm and as quiet as a bottle of cider after the cork has been drawn half a day.

EARLY RISING.

To rise early is so truly the one thing needful above all—to those who are candidates for either of those capital prizes—Health, Wealth, or Wisdom, that it is the only sure foundation for securing any chance of obtaining either of them.

"He that would thrive
Must rise by Five;—
He that has thriven
May lie till Seven."

Instances may be found (but very seldom) of persons, who have set up late becoming wealthy, but they have paid for it the unwise price of their health. You cannot remember one solitary example of a sluggard having ever obtained one of these blessings of life. "Shake off dull sloth and early rise." There is no time spent so stupidly as that which inconsiderate people pass in a morning between sleeping and waking. He who is awake may be at work or at play; he who is asleep is receiving the refreshment necessary to fit him for action; but the hours spent in dozing and slumbering are wasted, without either pleasure or profit. The sooner you leave your bed the seldomer you will be confined to it. When old people have been examined in order to ascertain the cause of their longevity, they have uniformly agreed in one thing only, that they "all went to bed and all rose early."

GERMANY.

The following interesting passage is taken from an article in the last London Quarterly Review, upon a "Tour in Germany," &c. an engaging little work, recently published in England:

Amongst the ladies of Weimar, as also of Saxony, there is a simplicity, which is quite delightful; knitting and needle work know no interruption at home or abroad, and a female going to a route might forget her fan, but would, assuredly, remember her work-bag. At Dresden, even the theatre is not protected from the needle and knitting-pin, and our author has seen a lady gravely lay down her work; wipe away the tears which the sorrows of *Thekla* had brought into her eyes, and immediately proceed with her stocking foot. It was not, however, to be expected, that in a town which prides itself upon its learning, the softer sex would always be free from pedantry, and, accordingly a few clubs of Blues have been formed to drink tea, and "talk about Shakspeare, taste, and musical glasses."

SPORTING OLIO.

New Orleans, March 19.

On Thursday, 12th inst. commenced the New Orleans Jockey Club Races over the Union Course; 4 horses were entered for the first day's purse of 1000 dollars, four mile heats, which was taken by Mr. Bingaman's horse Walk-in-the-Water, winning the two first heats. Mr. Allain's mare Otway contested the prize; Hit-or-Miss having stopped soon after starting, and Boaster was thrown down by a mule on the track, the first heat. Running time, 1st heat 8 min. 25 sec.—2d do. 7 min. 30 sec.

The second day's races, yesterday, afforded fine sport, and finer running was never seen in Louisiana. The three mile heat for a purse of $600 was well contested between Gen. Hampton's sorrel horse Candidate, and Mr. Dauplantier's bay horse Louisiana Eclipse. The race was won in fine style, in 6 min. 2 sec. by Candidate, who proved himself a horse of superior speed and bottom. The two mile heat for $400 was equally well contested, and afforded equal gratification and pleasure.

The same horse that was thrown down by a *mule* on the first day, was yesterday stopped by a *cow* in the first heat. These occurrences should be prevented. [Undoubtedly!]

In addition to the heats for the purses, many minor races were run, which added much to the amusement of the day. Besides the race for the Jockey Club purse, several matches are already made up for this afternoon, and real sport is anticipated.

POETRY.

FOR THE AMERICAN FARMER.

THE APPLE.

When from the womb of nature sprung
The various sweets her bounty flung,
And each in wild luxuriance hung,
A banquet feast,
Her choice gifts it grew among,
Nor here the least.

With blooming hue to charm the eye,
And fragrance fresh as seek the sky,
And sweets the most deliciously
All centre here,
While from it flows, and bounteously,
As good a cheer.

The sons of Hymen oft have sought
Its gentle aid, when there was nought
With so much power and beauty fraught,
The heart to gain:
And by it many a one's been caught
In wedlock's chain.

So when Cydippe proved unkind,
Acontius, on the blushing rind,
In magic song revealed his mind,
That knew not how
In softer, stronger ties to bind
The maiden's vow.

And Atalanta, whose swift flight
Had gained her all a maid's delight,
How in its *form* the metal bright
Was used t' decoy;
And Hippomenes gained the right,
And gained his joy!

'Tis here, where freedom's sacred ray
Beams as the heavenly orb of day,
It grows more fair than far away
In other soils,
And will more plenteously repay
The labourer's toils.

Where freedom's noblest sons, who guide
Her noble empire, vast and wide,
Cease, when their public years subside,
From public care,
Court the mild shade, and feel a pride
Its boughs to rear.

WILLIAM.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 22, 1825.

We invite the attention of the farmers and planters to the following notice, relative to The Baltimore Infirmary; as we are aware that many valuable servants on their estates, are rendered useless or even burdensome to their masters, by diseases of the *eyes*, which may generally be cured by an operation, that is by no means severe. The same remark may be applied to cases of tumours on various parts of the body, which impede action or render labour painful; to the consequences arising from various injuries; to fistulous ulcers; to ulcers with diseased bone, &c. &c. Address to Doctor Samuel Baker, North Charles-street, or to Doctor Richard Wilmot Hall, East Lexington-street.

THE BALTIMORE INFIRMARY,

In Lombard-street, near the University, is open every day for the reception of persons with diseases or accidents which require medical or surgical treatment. The institution is visited daily by the Physician and Surgeon, and the Examiners of the Medical and Surgical Faculty of Maryland and the Medical Faculty of the University are invited to hold consultations on important cases when admitted. The sick are attended at *all* hours by the "*Sisters of Charity*," who also preside over the economy of the house. The whole expense for board, washing, and professional care, &c. is $3 per week.

Maryland Agricultural Society.

Agreeably to adjournment, the Board of Trustees met, on Thursday the 14th, at the residence of J. B. Morris, Esq. Of the whole board there were but two absent, and one of them was not in the state.

Amongst other proceedings, the following resolution, offered by J. S. Skinner, was unanimously adopted.

Resolved, That it is expedient to appoint three practical farmers, judges, in each county, with authority to examine and report upon the claims of the candidates in their respective counties, for the premiums offered for best managed farms, in June, 1826, agreeably to the scale published in the American Farmer of March 11, vol. 6, page 401. That it be the duty of said judges to proceed conjointly, on the invitation of any candidate, to the actual view of his farm; and that, having compared the merits of the several claimants, they select the two, in their respective counties which they think best entitled to the distinction of the society, and that they make particular report to this board, of the grounds of their decision; with an account of the expense, and a description of the management and system of cultivation pursued on the farms so selected; and finally, that said reports be sent in to this board, on or before the first day of January, 1826.

Resolved, That the said reports, when received by the board of trustees, be placed in the hands of a committee to be by them appointed, which said committee shall be required to compare these reports, and from the best and most impartial view of the merits of different claimants, they shall award the premiums offered, as above mentioned by this society, of a piece of plate valued at $50.[*] for the best, and one of $30, for the second best farm.

☞ *Note*. The board would have proceeded to the appointment of three judges in each county, but it was deemed best to postpone that until the next cattle show, on the first and second of June, when it is supposed the appointment can be made with better understanding.

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[*] In the Farmer, vol. 6, page 401, there is a mistake, Twenty dollars are there offered for the best managed farm, instead of fifty dollars. The board have judged it best to make these premiums permanent.

☞ All persons having *fine* animals of any species, for sale, at the cattle show in June, would do well to give early notice in the Farmer, where they may do it without charge. This will naturally attract buyers, and good prices may be expected. Would the Virginia papers give notice to their patrons, that a few *thorough bred* young mares and horses would command a fine price, New-Yorkers will come on and purchase, if they know *what* will be for sale.

Foreign News *bearing on Agriculture.*

Liverpool papers to the 23d of March have been received at New-York.

Prince Metternich had arrived in Paris. It was confidently affirmed that the affairs of Turkey and Greece were connected with his journey.

The accounts from Greece are of a favourable nature. Constantinople was in a very unsettled state, and the discovery of a very dangerous conspiracy against the Sultan and the execution of the ringleaders, had not the effect of ensuring tranquility. Accounts from Corfu state that the campaign had begun auspiciously, and that in a naval engagement off Rhodes, twenty-five transports of the Egyptian fleet, laden with troops, horses and provisions, had been captured.

Liverpool, March 22.—We have had a fair demand for Cotton during the past week, from speculators and the trade; and, at the conclusion, rather better prices were obtained. The sales consist of 6500 American, 3800 Brazil, 2400 Egyptian, and 400 East India; and the imports, 6400 American, 1800 Brazil, and 1600 Egyptian. Prices—Sea Island, 26 to 36; stained do. 14 to 18, Upland, 12 to 15; Alabama and Tennessee, 12½ to 14½; New Orleans, 13 to 16.

Memoirs of the Pennsylvania (not Philadelphia) Agricultural Society, with elegant engravings, published, and for sale by the Editor of the American Farmer, at $1 50.

Tobacco.—Mr. William Bowie, of Prince George county, sold sixty hogsheads for $9¼ per hundred—Inspected, the past week, at Warehouse No. 1, 280—at No. 2, 301—total, 581.

The price quoted for white wheat is that of an actual sale; but the lot was very fine, and the sale perhaps a few cents above the average price.

SEED, GRAIN, WINE, &c.

Deposited since last notice with the Editor of the American Farmer, for the use of his subscribers.

Dear Sir,—I enclose a small packet of Shiraz Tobacco Seed, which I have just received from Mr. Sabine, secretary of the Horticultural Society of London, and which had been forwarded from Persia. I hope that this variety of tobacco will flourish in your soil. You are well apprised of the high estimation in which it is held. I am, very truly, yours,

Albany, April 15, 1825. DE WITT CLINTON.

Yellow Corn—weighing sixty pounds to the bushel, from Isaac Munroe, Esq., with the following note:

"I send you the corn I mentioned to you. It is from the Susquehanna, and is deemed by good judges to be of very superior quality. It weighs at the rate of 60 pounds to the bushel, while the common quality rises to about 50 pounds. I. M."

Two dozen bottles of Scuppernong Wine, from North Carolina—one doz. for the Editor, and one for the Maryland Agricultural Society, at their exhibition in June.

A Pamphlet, containing a description of the celebrated "*Clinton Vases*," and an account of their presentation.

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On Sheep—Curing Tobacco—Indian Corn—Pennsylvania Agricultural Society—Orchard Grass—Moles and Cut Worms—Vines—The Holly for Hedges—Jesse Buel—White Mulberry and Silk Worms—Plantation Grist Mills—English Walnuts—Internal Improvements in Indiana and Illinois—Chesapeake and Delaware Canal—Union Canal—Ohio Loan—Ornithology—Notes of a Desultory Reader—Races in New Orleans—Poetry—Infirmary—Maryland Agricultural Society—Commercial—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9	9	10
BACON, and Hams, . .	lb.	6 50	8		
COFFEE, W.I. Green, .	—	17	21	20	25
do. Common,	—	15	16	18	
COTTON, Louisiana, &c.	—	27	28		
Georgia Upland, . . .	—	22	24		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	10	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32	33		
FISH, Herrings, Sus. new	bbl.	2 25		2 50	
Shad, trimmed, new,	—	7		7 50	
FLAXSEED, Rough, . .	bush	80	85		
FLOUR, Superfine, city,	bbl.	4 87			
Fine, ...	—	4 37	4 50		
Susquehanna, superfi.	—	4 75	4 87		
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5			
GRAIN, Indian Corn, .	bush	37	39		
Wheat, White, ...	—	1 05	1 12		
do. Red, ...	—	1 00	1 05		
Rye, ...	—	37	40		
Barley, ...	—	50			
Clover Seed, ...	—	3 25		3 50	3 75
Ruta Baga Seed, . . .	—	1			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—			none	
Beans, White, ...	—			none	
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	9			
LIME, ...	bush	23	25		
LEATHER, Soal, best,	lb.	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 50		1 75	
Pitch, ...	—	1 50	1 75	2	
Turpentine, Soft, . .	—	2	2 50		
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	33			
RICE, fresh, ...	c.lb.	3 50	4 25	5	
SOAP, Baltimore White.	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	23	27	37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—		27		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	
do. Brown, . .	—	10			
Louisiana, ...	—	8 25	9		
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Turk's Island, ...	—	49			
Ground Alum, ...	—	50			
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. L. M. . .	—	1 75	2		
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Sherry, ...	—	1 10	1 15	1 50	1 75
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

PROCEEDINGS OF AGRICULTURAL SOCIETIES.

Communicated for publication in the American Farmer.

UNION AGRICULTURAL SOCIETY.

The report of the board of Managers of the Union Agricultural Society, which we insert in this day's paper, will be read with much interest by the Agricultural portion of our fellow-citizens; and we would call the attention of our readers particularly to the appeal to the community which will be found in the latter part of it, made, in support of an institution which holds out a high promise of general utility, if it meet but with that support which the interest and welfare of all our Agriculturalists imperiously demand.

At the second annual meeting of the Union Agricultural Society, the following gentlemen were elected officers of the institution for the present year:

John Couper, sen. *President.*
Joseph Law, 1st *Vice-President.*
James Smith, 2d *Vice-President.*
James H. Couper, *Corresponding Sec'y.*
James Troup, *Treasurer.*
Joseph Jones, } *Standing Committee.*
Charles West, }
D. H. Brailsford, }

Report of the Board of Managers to the Union Agricultural Society, at their annual meeting, 10th Feb. 1825.

In compliance with the duty enjoined on the Board of Managers by the constitution, the following report is respectfully submitted to the Union Agricultural Society.

The earliest attention of the members of this Board, after its organization, was given to promote the various objects of the Society as far as the limited means within their reach admitted. On mature consideration, they were of opinion, that the most valuable practical results would be attained, by directing the resources of the Society exclusively, for the present year, to the establishment of premiums. These were announced at an early period of the last summer, and having been recently republished, it will be necessary only for the Board, on this occasion, to submit to the Society the principles which have governed them in the selection of the objects of encouragement.

These have been, to bring to perfection the culture of the primary staples; to encourage that of the secondary crops; which contribute to subsistence and comfort; and to introduce new and valuable productions.

In reference to the first class of objects, they have offered encouragement for the most successful culture only of each product. They are aware, however, of the importance of directing attention to specific inquiry, in connection with the general mode of culture; which, if judiciously selected, by confining observation and experiment to a single and definite point, will be more likely to lead to distinct and useful knowledge, than if diverted to many. So strongly impressed are the Board with the efficacy of this mode of investigation, that the objects of the premiums established, would, in part, have been selected on this principle, had they not deemed it important, as a preparatory step, to procure general information as to the best mode of culture in each case; and thus to enable the Society to direct inquiry with more certainty, to the remedy of deficiencies, or to the prosecution of improvement.

In calling the attention of the community to the improvement of secondary crops, the Board have been governed by the double motive, of advancing the interests of those sections of the country which offer no facilities for the cultivation of the primary staples; and of drawing a part of the labour and skill of the more favoured districts from the absorbing pursuit of one object, and of directing them to those which tend in a greater degree to domestic economy, comfort and happiness. This is a subject fruitful in remark, and pregnant in important consequences to the advancement and happiness of the community; but the limits of this report admit only of an allusion to it, and the simple statement of the fact, that where industry has been directed to the acquisition of the conveniences and comforts of life, public improvement and private happiness have followed in its train;—but on the contrary, where the pursuit of one object, however lucrative, has absorbed attention,—embarrassment, the want of comfort, the absence of improvement, unhappiness, and vice have been the consequences. We need but name the mining countries of America—the tobacco districts of Maryland and Virginia—and the cotton growing states of Carolina and Georgia, in proof of the correctness of these remarks, and as illustrative of the fact, that the true wealth of a country consists not in the mere amount of its gross production, but in its augmented means of subsistence, comfort and happiness.

As the introduction of the vine, the olive, and the hemp, and the revival of the culture of the indigo, from their intrinsic importance and peculiar adaptation to our climate, have held out the highest promise of utility and success, the attention of the members of this Board has been particularly directed to their encouragement. They are forcibly impressed with the important effects which may result from the extended culture of the vine and the olive; and therefore beg leave to trespass on the patience of the Society, while their attention is requested to a few remarks tending to show—the probability that they may be made to flourish in our climate;—their value as objects of culture;—their influence on the comfort and happiness of the community;—and the advantages which they offer in reference to our peculiar situation and wants.

The range of climate which admits of the culture of the vine, is so extensive as to leave no doubt that all parts of the middle and southern states are adapted to it. In Europe, the region for the finest wines extends from the 36¾° to the 49° degree of latitude, which by a comparison of the growth of the same vegetable productions on the two continents, possesses the climate of that portion of this, embraced within the 27° and 40°. If further confirmation were necessary, it may be obtained in our own country, in the fact that vineyards have been established many degrees north of us, with the most flattering prospects of success. That our climate is not too warm, we have every reason to believe, from the circumstances that some of the choicest wines of Europe are produced in the more southern latitudes; and that the finest kinds of grapes require a long and warm season to mature them. But we have stronger facts than any to be derived from comparison and analogy, and which are only less conclusive than the establishment of vineyards on an extensive scale:—the luxuriant and fruitful growth of the vine in almost every variety of our soil in which it has been planted, particularly in the sandy lands a little removed from the ocean, when in despite of neglect and ignorance, it luxuriates as if vegetating in an indigenous clime.

The next inquiry is, whether our soil is favourable to the growth of the vine. Of this we have the most satisfactory evidence in the fact just mentioned, and in the declaration of the Abbe Rozier, the highest French authority in agriculture, that the soils best adapted to produce the finest qualities of wine, are those which are sandy and gravelly; and that the vine thrives best in the poorest soils. Admitting its successful culture, the question occurs whether it can be made profitable. On the authority of Chaptal, we are informed that there are in France, 1.350.400 acres of land employed in the culture of the vine, yielding an annual value of $100.800,000, being $75 to the acre nearly. The result of Arthur Young's inquiries in France as early as 1789, was that the average *product* per acre amounted to $7.40 from arable lands, and from vines to $32.37. That the *interest* on capital invested in the first was 3½ per cent.—in the latter from 7 to 10 per cent. The *rent* given for arable lands was $3 50 per acre, for that in vines, $17.—The difference in favour of vines being nearly as 5 to 1. The annual production of the vineyard at Vevay, on the Ohio, has been stated at 250 gallons to the acre; which, at 30 cents the gallon, gives a value of $75. We may assume that there are in the United States about 800,000 acres of land employed in the cultivation of exported cotton, which yielded in 1823, 173,000,000 pounds, valued at $20,415,520, being $25.50 per acre.—The usual crop of sea island cotton does not average more than 150 pounds to the acre, which, at 30 cents, gives a value of $45.—It appears therefore the average value of the production of the vine is three times that of cotton generally, and more than two-thirds greater than that of sea-island. This superiority can be supported in a comparison with any other of our primary staples. It is believed that the labour devoted to the culture of the vine, does not exceed that of cotton.

The olive has been the theme of panegyric in all ages. The imagination of the poet has delighted to associate it with the blessings that flow from peace and plenty, while the judgment of the philosopher has placed it among the first in rank of those gifts of a beneficent Providence which contribute most largely to the comfort and happiness of the human race. The ancients have conveyed to us the strongest evidence of the estimation in which it was held among them, in that beautiful fable of their mythology, where, in the contest between two of their deities who should produce the gift the most beneficial to mankind, the Goddess of Wisdom obtains the prize, by causing the olive-tree to spring from the ground.

Mr. Jefferson, in his letter to the Agricultural Society of South Carolina, says of it, "of all the gifts of heaven to man, it is next to the most precious, if it be not the most precious." This testimony in its favour was the result of extensive and particular observation; and would in itself be sufficient to incite to the inquiry, whether it could be introduced among us. This is a question which we are unable to answer as satisfactorily as could be wished. But, that the probability of success is such as to warrant the attempt, we hope to show by the following brief view.

The olive flourishes on the shores of the Mediterranean, between the 36th and 44th degrees of latitude, nearly equivalent to the 25th and 34th of our continent. But we have a safer guide than that of a reference to climate, in the growth of the orange tree, which is known to be much more susceptible to injury from frost than the olive, and ceases to exist when the latter is still found to flourish.

Hieres, one of the most southern points of France, is the only one in that kingdom at which the orange will thrive in the open air; and it has even there not been exempt from frosts which have cut it down to the ground. To the north of this lies that district of Provence so celebrated for its oil. As the orange thrives on the milder situations of our coast, we have every reason to believe that at those points at least, the olive will be found to succeed. There are also good grounds to presume that it may be cultivated at almost any part of the maritime section of our state.

That there is nothing in our soil opposed to its introduction, may be safely assumed, as we are informed by the high authority already quoted, that "the nature of the soil is of little consequence, if it be dry," and "that they require so little nourishment, that if the soil be fit for any other production, it may be cultivated among the olive trees without injuring them." In the thin, dry soil of Attica the olive finds its most congenial residence. The profit which may be expected to result from its culture, may be drawn from the circumstances, that 100 trees may be grown upon an acre of land, each of which will yield annually an average of 10 pounds of oil, which, at the moderate price of 10 cents the pound, gives a value per acre of $100.

Valuable as the olive and the vine are, as highly productive objects of culture, their importance is immeasurably increased when they are considered in reference to the peculiar wants of our country. Who that casts his eyes over that wide extent of waste and sterile soil, which, with the trifling exception of a few islands and narrow strips on water courses, spreads from the Atlantic to more than a hundred miles into the interior, and which appears by nature and an improvident custom of burning, doomed to the eternal curse of barrenness, will attempt to estimate the advantages which will flow from the introduction of plants which may convert that waste into a garden, and change that curse of barrenness into a blessing of fruitfulness? What heart that delights in the contemplation of human happiness, can measure the value of that which shall people with a dense, comfortable and well informed population, this almost uninhabited region? Who will attempt to predict the effects on the future destinies of our country, of a culture, the tendency of which will be to substitute a class of free labourers for one of slaves—which presents the only obvious remedy for the evils of an institution that all deplore, and all despair to remedy.

But there is another motive why we should now direct our attention to the introduction of new articles of culture, which may prove more cogent than those which have been enumerated, because, bearing more directly on our immediate interests—it is the necessity which is forced upon us of finding some substitute for the rapidly depreciating staple, cotton. When we reflect that the United States furnish to Europe the greater portion of the cotton now used in her manufactures, that the extent of land occupied in its culture is not greater than that contained in this and the adjoining county of Liberty; that it comprises but a fortieth of this state; not a two hundredth part of our territory congenial to its culture; that the vast regions of South America, endowed by nature with a climate and soil surpassed by none, are now awakening into a developement of their great resources; that the facilities of commerce bring into competition the productions of the most remote nations—when we consider the ease of the culture, the simplicity of the preparation, and the small amount of capital invested in the growth of cotton, can we estimate the extent to which it may be cultivated? Can we believe that its production will cease to be augmented, until, like all other great agricultural products adapted to the climate of many regions, it shall merely defray the expenses of cultivation and of subsistence.

The increase of consumption has, until within a few years, been commensurate with the production. But it is obvious that this ratio could not long exist; and we have already found by a steady reduction of prices, that the latter has gone beyond the former.

Since 1818 there has been an almost continued decline. In 1818 the average price of all our cottons was 32 cents per lb.; during the succeeding years 21 cents, 17 cents, 16 cents, 16½ cents—until in 1823 it had sunk to less than 12 cents. This depreciation has been almost in the direct ratio of the increased production.

In 1819, we exported . . .	87,997,045 lbs.
In 1823, ...	173,723,270

But while the production of the latter year nearly doubled that of the former, the proceeds of it have been actually less by half a million of dollars.

The Board of Managers would here willingly close this report, did they not feel it incumbent on them to allude to a subject which must diminish the utility, and threatens even to terminate the existence of this society—the want of zeal evinced by the community in support of it. As they cannot regard this indifference as proceeding from an imperfect view of the good which may be expected to result from institutions of this character, they are induced to make a brief enumeration of a few of the arguments in their favour, which although trite, may yet find an excuse for their repetition, in the fact of the existence of such a feeling.

That agricultural societies are the means of concentrating scattered facts; that by bringing into notice different practices they afford opportunities of arriving at the best, and of giving to them a diffusive circulation; that they incite to inquiry and useful experiment; direct public attention to the perfecting of improvements and to the correction of evils; that they excite a generous spirit of emulation among agriculturists, and produce a union of feeling and concert of action on all subjects important to the great interests of agriculture, are effects no longer to be classed among speculative truths, but recorded facts.

The importance of these objects will be sufficiently apparent from their mere enumeration. But if confirmation were necessary, it will only be requisite to direct our attention to the other classes of society to perceive the advantages which they have derived from an interchange of ideas and a concert of action. We find them occupying a rank, which is the effect rather of unity of thought and of action, than of their intrinsic importance. On the other hand, we have perceived agriculture a pursuit which has been pronounced in all ages, by reflecting and philosophical minds, to be the first in usefulness and the first in dignity, depressed the lowest in rank of the great pursuits of society—its practice consigned to the most ignorant, and its principles limited to vague empiricism. It is only since philosophical minds have carried into the field the deductions of the closet, and correct observations of facts have been generalized by the lights and principles of science, that agriculture has begun to assume its proper rank. The first effort of its intelligent members has been to establish agricultural societies, being well aware that a collision of ideas would elicit information, and that by the diffusion of information the surest foundation would be laid for the dignity and utility of the pursuit. The result has every where realized these just anticipations. Where intelligent agriculturists are, there are to be found agricultural societies; and where agricultural societies exist, there the march of improvement has been rapid and steady.

By agricultural societies, we mean not those abortive associations, which are societies in name, but not in fact—which are organized at a moment of excitement, but which are destined even at their birth to witness the decay of the feeling which produced them—which linger through a short period of forced existence, and then pass away, leaving behind the painful conviction that there is not in the community, enough of zeal, or of intelligence, to devote a little exertion, a little time,—to make a small sacrifice of selfish ease to an object of high public utility. But by agricultural societies, we mean institutions supported by the combined zeal, talent and information of the community—institutions to which every member brings his portion of useful knowledge, while he receives that which is furnished by others. And where a conviction exists that it is not on the exertions of the few, but of the many, that they can be either upheld or rendered extensively useful.

If such are the objects to be obtained from the formation of agricultural societies, the members of this community are called upon to give them the support of their best exertions, unless it can be shown that our agriculture has arrived at the point of perfection.

Is this the fact? Is the practice of our planters in the cultivation of any one of our numerous products conducted on fixed, accurate and scientific principles? Have we a rotation of crops adapted to our soils and to our climate? Is an extensive system of manuring adopted, or are we as yet but awakening to the discovery that a fallow is preferable to the perpetual recurrence of an exhausting crop? Is there no useful knowledge to be acquired of the nature and preventives of the diseases to which our most valuable plants are exposed? Do our plantations exhibit an appearance of permanent and economical improvements, of neatness, of order, of comfort, and of plenty? To these questions we will not reply. But to those who cannot, it must be said that they have yet much to learn.

We are aware that the disasters of the last year and the general embarrassments of our community, have produced a wide spread feeling of depression. We know that the moment of despondency is not the most favorable for the establishment of an institution, whose foundation is peculiarly the spirit of its members. But we also know that accumulating embarrassments call for increased exertion; and that new disasters are only to be obviated by the acquisition of new skill. Do we perceive that our staple products have declined in value? Is this reduction in our incomes to be counteracted by relaxing our exertions and giving way to despondency—or by the application of greater skill to increase production, and by judicious economy to diminish expenditure?

But there is yet another view of the importance of agricultural societies, in reference to their effects on that class of the community of which we are members,—their tendency to elevate agricultural pursuits to their proper rank, by inculcating large and liberal views, and by establishing its practices on precise and scientific principles. We hold it to be incontrovertible, that knowledge which constitutes power, is the source also of refined feeling and elevated thought—that in proportion to the diffusion of information, will be that of pure tastes and lofty virtues. How much, therefore, should those institutions be encouraged in a country, whose government has no foundation but that of public opinion—and no security from that opinion, but in the intelligence and virtue of its members! How much the more should it be cherished among that class, which, constituting five-sixths of the population of the United States, is destined by its numbers, its habits, its removal from the vices which corrupt, and the passions which agitate more dense communities, to exercise by its virtues a purifying influence on the moral atmosphere of the nation—and by its numbers and its intelligence to resist the progress of power and licentiousness. For ourselves, whose wealth, whose happiness, whose consequence in society, whose dignity in the scale of existence, is so intimately connected with the advancement of our profession, what arguments should be necessary to excite to the encouragement of whatever may have even a remote tendency to render it worthy of the encomium of one of the greatest minds of antiquity,—"that there was nothing superior, nothing more fruitful, nothing more delightful, nothing more worthy of a liberal mind, than the pursuits of agriculture."

Extract from the Proceedings of the AGRICULTURAL SOCIETY OF ALBEMARLE.

Monday, April 11, 1824.

The following Report from a committee appointed for the especial purpose, was received, read, and after some amendments, adopted by the Society, and ordered to be published in the American Farmer.

The Committee appointed at the last meeting to prepare and report a plan for an Agricultural Exhibition and Fair, to be held by the society in the autumn of 1825, have given to the subject all the consideration which, in their opinion is due to it, from the unlimited discretion conferred on them in their appointment. Regarding it mainly as an attempt to revive the zeal and exertions of the society, which, much to our reproach, has been too long dormant; considering the subject as novel and untried among us, and having a due regard to the actual funds of the society, the committee in recommending a first essay, are induced to limit the exhibition to a few subjects most conformable to the objects which the society has in view, and best calculated in their opinion to attract public attention. These consist,

1st. Of Agricultural Implements, and particularly the Plough, the perfection of which ought to claim our first attention, as it is the chief instrument for dividing the soil, and of course the basis of all our husbandry.

2d. Fine Breeding animals, calculated for the saddle or draft, for food or clothing, which will comprehend horses and mules, neat cattle, hogs and sheep.

3d. Domestic Manufactures, in which the ladies of our state will not be excluded from a due participation in our exertions, or a patriotic and praiseworthy emulation in that branch of industry which is likely to become the only source of clothing left to the agricultural states of the Union, if we may be allowed to judge from the efforts of the last session of congress, to diminish our imports, by an increased tariff of duties. These will comprehend fabrics wrought of wool and cotton, either separate or mixed, of flax and of hemp. Your committee are aware that there are many other subjects eminently entitled to the society's encouragement—but at present they will confine their recommendation to those above enumerated, and now submit the following scheme:

'The Society will hold an Exhibition and Fair of Agricultural Implements, Live Stock, and Domestic Manufactures, in Charlottesville and its vicinity, on Tuesday and Wednesday, the 8th and 9th days of November next, (1825,) and offer the following premiums to be then and there awarded:

Agricultural Implements.

For the best plough, to be tested by actual trial, simplicity of construction, efficiency of performance and facility of draft to be considered,	$10
For the best constructed wheat fan,	5
For the best straw cutter,	5

Live Stock—1st, CATTLE.

For the best bull, not more than six, nor less than two years old,	$10
For the second best, do.	5
For the best cow, not more than seven nor less than three years old,	10
For the second best, do.	5
For the best yoke of working oxen, not more than eight nor less than four years old—*reference being had to their performance at the plough,*	10
For the second best, do.	5
For the best *fatted ox,* not more than nine nor less than three years old, reference being had to the mode of feeding,	8
For the second best, do.	5

2d.—HORSES.

For the Stallion best calculated to improve our breed of draft horses, not more than nine nor less than three years old,	20
For the Stallion best calculated to improve our breed of riding horses, do. do.	20
For the best brood mare, not more than nine nor less than three years old,	10
For the second best, do. do.	5
For the best colt, not over two years old the preceding spring,	5
For the second best, do.	4

3d.—SWINE.

For the best Boar, not more than four nor less than one year old,	5
For the second best, do.	3
For the best sow, not more than four nor less than one year old,	5
For the second best, do.	3

4th.—SHEEP.

For the best Ram, not more than four years nor less than 18 months old,	5
For the second best, do.	3
For the best pen of Ewes, not less than four in number,	5

Ploughmen.

For the best ploughman with horses,	5
For the best do. with oxen,	5

Domestic Manufactures.

For the best piece of linen cloth, for shirting or sheeting, one yard wide and not less than ten yards long,	5
For the best piece of flannel, 7-8ths wide, and not less than ten yards long,	5
For the best carpeting, one yard wide and not less than twenty yards long,	10
For the best piece of woollen cloth 3-4ths wide and not less than ten yards long,	5
For the best pair of blankets, not less than two yards wide nor 2½ long,	5
For the best piece of woollen vesting, not less than 3-4ths wide nor ten yards long,	5
For the best woollen counterpane,	5
For the best cotton do.	5
For the best woollen knit hose, not less than two pair,	2
For the best man's hat, made of grass, straw, chip, or other vegetable material,	5
For the best woman's hat or bonnet, do.	10
For the best piece of cotton shirting or sheeting, not less than 3-4ths wide nor ten yards long,	5
For the best piece of cotton vesting, not less than 3-4ths wide nor ten yards long,	5

Persons from any state may become competitors for premiums offered for agricultural implements; and the manufacturers of ploughs in particular are invited to offer their productions for trial. Those offered for live stock, shall be confined exclusively to members of the society, who shall either have bred or owned the animal offered at least 4 months immediately preceding the exhibition; and the successful candidates for breeding animals shall give a pledge not to remove them beyond the precincts of the society for the next ensuing twelve months.

Premiums for Domestic Manufactures shall be confined to persons living within the precincts of the society, (that is to say, in some county of the state in which a member or members reside,) which must have been wrought in their families. In every case where the judges shall think the article offered for premium is unworthy of distinction, the right of rejecting is reserved, and in every case they will require such evidence as they may deem proper, to establish the claim.

A committee of five members shall be appointed, who shall be styled "the Committee of Arrangement," to do all things proper and necessary to carry the foregoing plan into effect—such as to select ground for a ploughing match, have pens erected for stock, appoint a deposite for manufactures, appoint judges for each, &c. and report their arrangements to the next meeting of the society.

Extract from the minutes,

P. MINOR, *Sec'ry.*

FROM THE NEW ENGLAND FARMER.

Rhode Island, April 16, 1825.

Mr. Fessenden,

For many years past there has prevailed a scarcity of stone fruit in this state, particularly in and near the seaports. My garden is on a sand bank by the sea shore, but nine miles from the open ocean; a small lot crowded with fruit trees. Apples do not bear well; pear trees will not thrive on its soil; but peach, plum and cherry trees bear well with the proper management, which is as follows:

Canker worms, &c. were wont to attack my plum trees—the leaves fell, leaving the fruit, which did not come to maturity, but soon after also fell, unripe and wormy. Fish oil (the most offensive is best,) was rubbed with a painter's brush on every limb, and also on the trunk, the earth about the roots dug some inches deep and carried off, the ground under the trees hoed and swept, fresh sods placed round the roots, and ashes, from the ley cask, strewed for some distance under and around the trees. This was performed in the autumn. The April following the trees were white washed all over the trunks and larger branches. While in blossom they are smoked night and morning for a week with tarred oakum or any trash, strewed with sulphur or roll brimstone. A frying pan answers well for this purpose, as it can be held high and close to the blossoms. The blossoms of the plum and cherry trees contain a very small fly, which appears while the smoke is applied to the blossoms This fly ruins the fruit, causing it to fall off prematurely; it is suffocated by the tar or sulphur fumes. Peach trees not to be smoked, but it is requisite to dig the old earth from the root every autumn, replacing it by fresh sods, and to white-wash in the spring. Lime and old ashes may be scattered round the root. No other enriching is necessary, except chip trash from the woodpile.

Plums may be trimmed as you please, but peach and cherry trees not without danger of gum, which injures the fruit, and eventually ruins the tree.

My fruit abundantly rewards my pains, the peaches especially, which bear profusely every year, while those who neglect this process, complain they have no fruit.

The common sugar-plum tree will bear the third year from the sucker—is the most thrifty and lasting stock which I have found for innoculation. The fruit is very sweet, handsome, and good for preserving.

Gooseberries, in many gardens near the sea, mould and fall from the bush. I find that dry manure from the stable put round the roots in the winter, and scraped away in the spring, prevents this evil, and they bear and ripen well.

I must not omit to mention, that the white mulberry, from the seed, will bear the fourth year. I have a fine row of them. A moist rich soil suits them best, but by attention they will succeed any where.

I make these communications from the hope they will be attended to, as experience convinces me of their utility.

Currants bear in three years from the seed, if planted as soon as separated from the juice in making wine. If you give the bushes their proper form the second year, they need no more attention. The fruit is made fine and the bush more free from suckers than those from the slips.

Smoking with sulphur destroys the canker-worm, flies, &c. that infest the apple and pear tree.

I have sugar-plum trees (or, as some call them, grape plums, from the shape and purple colour,) which have borne for 15 years, and show no symptoms of decay, but the oldest limbs bear the most luxuriantly.

Should peachnuts be cracked carefully, sprouted in water a week, and planted in May, they will come up in three or four weeks, and grow as large in one season as these which were planted in the fall.

Pomona.

DOCKING HORSES.

ITS IMPOLICY AND CRUELTY.

Mr. Editor,

I have long considered the practice of docking horses highly injudicious; and I now ask the favour of a little space for the insertion of my protest against it. It is, I believe, peculiar to this and the mother country, from which we derive it. In Spain, France and Italy, long tails are universal. The Cossacks, Arabs and South Americans, who almost live on horse-back, never dock their horses.

The tail is, to the horse, highly useful and ornamental—nature makes no mistakes: nothing superfluous is given to any animal. As a defence against the cold in the winter, and flies in summer, its use is obvious. A horse that loses the smallest particle of his tail-bone never has the free use of it. That he carries it more gaily in consequence of having been docked, is a mistake.

As to *nicking* and *foxing*, practices of the same origin, still more cruel and absurd, they have gone so much out of fashion, that it is unnecessary to say any thing as to them. Nothing but a vitiated taste could have tolerated mutilations productive of so much deformity. I am happy to acknowledge that the practice of which I complain is gradually subsiding. The tail of a two year old colt appears to be too large for his body, because one has got its growth, the other not half. When he arrives at maturity, this disproportion vanishes—all is symmetry.

But you will be told that carriage horses, particularly gig horses, must be docked, or they will throw their tails over the reins!—that saddle horses must be docked, because, in wet weather, their tails get muddy!—and that all horses should be docked to improved their *beauty*. There is no accounting for taste. To improve his appearance, the African files his teeth to resemble a saw; the Indian slashes and distends his ears, whilst the females of more *civilized* life are content with *boring holes* through the bottom of their children's ears, thereunto suspending bunches of beads, coral, &c.; the Chinese compress the feet of their females until they are useless; and the South sea Islander of fashion, spends more than half his life in tattooing his swarthy skin.

Those who breed horses for sale, lose more in this way than they are aware of. Bring to market two colts, as equal in merit as possible, one docked, the other not—and a preference of from 10 to 20 per cent will be given to the one with a natural tail.

Gentlemen who do not reside on their estates, should prohibit their overseers, those great sticklers for customs, from docking colts. I have known several instances of fine colts being ruined in this way.

I am surprised that no notice has ever been taken of this grievance (to the horse a sore one,) by agricultural societies. Knowing you to be a warm friend of this noble animal, I submit his case, in this respect, to your care—he has many wrongs to complain of.

Monboddo.

Maryland, April 10, 1825

EXTRAORDINARY AND WELL ATTESTED CASE

Of two calves from one cow—with an interval of twelve days between their respective births.

Kenanoken, near St. Louis, March 11, 1825.

Dear Sir,

An occurrence lately took place in this city which, to me at least, was very novel and extraordinary. A cow of the common or scrub breed of this country, belonging to Mr. Daniel Hough, last year had two calves, a male and a female. About two weeks since this same cow had twins again, if indeed they may be so called. But that which to me is extraordinary is, there was an interval of twelve days between the bringing forth of the two last calves, *and they are both heifers*. They are nearly of the same, and of the ordinary size for calves of that breed of cattle, and are both very thrifty and sprightly. Their mother is said to be a very fine milch cow.

At this I have been almost as much surprised as at the account of a cow in Brookfield, Orange county, (New York, I presume,) from which, it is said, the butcher took a calf weighing 200 lbs., bearing strong indications of having shed its coat.

I am aware it is said a cow will go longer with a bull, than with a heifer calf. But these are both *heifers*—and no accidental cause known to accelerate the coming of the one sooner than the other. I have also observed in several authors, that in England, when a cow has twins, the female is generally said to be incapable of procreation, and therefore called a *free-martin*.

The most undeniable proof can be made of the two distinct births or calvings of this cow. At the birth of the first calf, the milk was thick, and as is usual on those occasions, unfit for use for several days. Some change in this respect, though not so great, was also observed at the birth of the second calf. As a matter of curiosity I intend raising one of the calves myself.

If such an occurrence is common, or has ever fallen within your knowledge, you will confer a favour on me, as well as many others in this quarter, by a statement of the fact*—also whether in America, as is alleged to be most commonly the fact in England, when a cow has twins, the female is a *free-martin*. Should you, however, think with me, that the circumstance above detailed is very singular and unusual, and is worth recording in your valuable journal, you are at liberty to publish this notice of it.

Very respectfully, your obed't servant,

WILL. C. CARR.

A SURE AND CERTAIN METHOD OF PREVENTING DOGS KILLING SHEEP.

Mount Airy, Caroline county, Va., April 6, 1825.

Dear Sir,

If an inveterate antipathy to the sight of a sheep can be produced in a dog, our harmless flocks would certainly be at all times safe from their depredations. This aversion can certainly be procured in the following manner. When the dog is about 6 or 8 months old, tie him to one of the strongest sheep in the flock, leaving a space of five or six feet between them; when let loose, the sheep will run and drag and choke the dog until its strength is exhausted—it will then turn upon him, and butt him very severely. Take care to have the dog well flogged with a switch while the sheep is dragging him. If he is a dog of high temper or spirit, and is not sufficiently humbled by the first lesson, give him a second, tied to a fresh sheep. It sometimes happens that he will snap at his antagonist; this may be remedied by muzzling him, or tying a string over or round his mouth above the long teeth. Take care to have the whole flock of sheep in a small enclosure, with the coupled one and the dog; it often happens that several in the flock will join in inflicting heavy blows upon him. By this time the dog has taken such an aversion to the company and presence of sheep, that he never forgets or outgrows it. The above remedy I have never known to fail in a single instance, and am encouraged to recommend it, by long experience, having raised dogs of different descriptions—hounds, curs, spaniels, and pointers, at different times—all of which, without a single exception that I now recollect, have undergone the above discipline, and not one instance has occurred where there was the smallest disposition shown for mischief. I at this time have a very sprightly and high spirited pointer, as much so as one can possibly be, which, when he unluckily falls in with sheep while hunting a field, always cowers and slinks off another way.

If the insertion of this in the American Farmer should be the means of saving a half dozen of sheep to a poor man, it will not be labour lost.

HUMPHREY HILL.

FOR THE AMERICAN FARMER.

TO DESTROY TOBACCO FLIES.

Mr. Skinner,

I am totally ignorant of the value of the following prescription for destroying the tobacco fly, even if it is as efficacious as pretended; nor do I know, if useful, that it has the merit of novelty, for I know nothing of the tobacco culture beyond the experience of raising some dozen or two of plants from the Caraccas seed you once had the goodness to send me. But this paper, such as it is, is at your service, and if it will not save your tobacco, it may serve to light your pipe.

A gentleman to whom I had promised a few plants, on visiting the patch, found they had been nearly destroyed by the fly. He then advised me to fire some splinters of pine, and set them at night in different places in the patch, when the flies would be attracted by the light and perish in the flames. He said they only committed their depredations at night, and that a few moonless dark ones, (favourable to the effect of the plan,) would enable one to save a patch entire. How much I saved by the experiment, the former ravages of the fly precluded the possibility of ascertaining.

W. F. F.

PROSPECT FOR CROPS.

Extract from Talbot county, April 24, 1825.

Our prospects for wheat are very various—some very good and more forward than has been long recollected; and some very bad—a larger proportion of sedge wheat than usual. Upon the whole the prospect now bids well for a full average crop here.

HORTICULTURE.

SOLANUM TUBEROSUM—POTATO.

Notice of those sent by Commodore Hull.

Boston, April 20, 1825.

Dear Sir,

I had the honour to receive your kind letter enclosing a bill of lading of a box from Commodore Hull, containing, as he supposed, the tubers of the common potato, found wild in Peru. I had particularly drawn his attention to this plant for the following sufficient reasons:

1st. Because for nearly two centuries, it was believed to be a Virginian plant, and called in Europe the Virginia potato.

2d. Because Humboldt, and Bonpland, his friend, declared, that it was *not* a native of *any* part of North America.

3d. Because the English botanists have, (within two years,) procured the wild potato, and have deemed it an object, at least, of great curiosity.

It is never found, in its wild state, larger than a musket ball—and I do not wonder at it. Left to itself, (being an annual tuber,) it must so crowd itself, that it could never enlarge its dimensions. On receiving commodore Hull's package, I at once thought that there had been an error, and that the tubers sent were *not* those of the *solanum tuberosum*. In this opinion, I am supported by Dr. Bigelow and

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* It has not.

Mr. Nuttall, at first inspection merely. The differences are, 1st. In the form of the tubers.—2d. In the small persisting fibrous roots.—3d. In the absence of eyes or hollows.—4th. That the new shoots start from one point on the top.

In the dried specimens, the differences observable are, 1st. That the leaves are not pinnate, as in the true potato.—2d. That the flowers are solitary, instead of being in a tuft or cyrne.

I have written to Mr. Southard, secretary of the navy, requesting him (if not an improper request,) to forward my letter to commodore Hull, and to desire him to procure the true tubers.

I perceive that your friends thought that they had received the potato of agriculture.

CULTURE OF THE VINE.

EXTRACT TO THE EDITOR.

Salem, N. C., April 12, 1825.

Of all our foreign grapes, none are apt to ripen at the same time in the same bunch; frequently a good many rot. In some seasons we have an abundance of native grapes in our woods, and fence corners, some of which are quite good. In a good season, a quantity of native wine is made of them, a part of which is good, and makes, mixed with water, an agreeable and refreshing drink in summer. So some sugar and a little brandy has been added to give it a body, which has proved very good. The cause why it is not in general use is, that the country people, who make it, bring it to market quite fresh from the press, or otherwise don't make and sell at all—and it is too frequently the practice with them to mix it with water; hence arises mistrust to all. *Quere*—How is water in it, *ab initio*, to be discovered? When water is mixed with it when it is made, it becomes in time either stale or sour, and assumes an acetous state, in which, however, it makes good vinegar. The native grape has not yet been cultivated, but the attention of some gentlemen begins to be drawn to the object, to procure vines of the best native grape, and to cultivate them.

RURAL ECONOMY.

SCUPPERNONG WINE,

Manufacture and sale of, in North Carolina.

[The wine accompanying the following article is truly a high flavoured, delicious beverage.]

Plymouth, April 10, 1825.

Mr. Skinner,

We believe it is a received opinion, that in those countries where wine is produced in great abundance, there is less intemperance known than in others where distilled spirits are used principally. If so, any effort to extend the manufacture of wine should be promoted. Though much has been said in private circles of the Scuppernong Wine, yet we have seen no particular notice of it, by which it has been introduced to the view of the nation. It is a fact not generally known, we believe, that this is the point from whence may be exported several hundred casks of wine annually, if sufficient encouragement was given to the growers of it. With a few orders which find their way to us, and which, for want of a more general acquaintance with the article, are very few indeed, the wine manufacturers now prepare from 300 to 400 casks annually, for sale. This wine is prepared by a population generally indigent, and who, if this article should become in demand, would at once rise into comparative opulence.

That you may judge of the article, we have taken the liberty to forward you, *via* Norfolk, 2 doz. bottles—one dozen of which you will please accept for your own use, and the other dozen we have to request you to present at the next Maryland agricultural exhibition, as a specimen of the product of this part of the country, in that particular article.

This wine is made without any fermentation, but simply by pressing the grapes, and by mixing 3 gallons of the pure juice with 1 gallon of apple brandy. The owners of vineyards find this article the greatest source of profit, in proportion to the labour bestowed on it. One acre of ground, if well set with vines, would readily produce juice enough, with the aid of the usual quantity of brandy, to make 20 bbls. of wine—say, juice 15 bbls., brandy 5 bbls.—making 20 barrels; which, at the usual price for wine of the best quality—say,

20 bbls. of 31½ gals. at $1 per gal. .		$630
Deduct for 5 bbls. brandy, at $15,	75	
Labour collecting the grapes, &c.	100	
	——	175
		——
Nett profit per acre, ...		$455

It would not require the labour of one hand a year to attend to a vineyard covering an acre of ground; yet one hand would be insufficient when the grapes are ripening. The aid of 4 hands a fortnight would be sufficient even at that time. This would probably afford a profit of $400 per acre to the grower of the article.

We make this communication with a view of giving some general idea of the cultivation of the article with us. We should be glad if some one of your correspondents could advise us, through your valuable paper, in what way the Champaigne wine is prepared.[*] You are at liberty to give a statement embracing the facts set forth herein; but, though we do not want our names appended to any public notice you may take of the cultivation of the vine, in private circles you have our consent to give our names to such of your friends as may be desirous of making any application for scions or wine.

We are, with much respect,
Your most obedient servants.

MILK PANS.

Having found the earthen and stone pans, both inconvenient and expensive, I determined to try the japanned tinned iron. I accordingly had imported one dozen of this kind; and being so much pleased with them, both on the score of economy and convenience, I have recently had another set imported, which can be examined any day this week, at the store of the importer, Mr. Richard Norris. W.

April 26, 1825.

INTERNAL IMPROVEMENTS.

LOCOMOTIVE STEAM ENGINES.

A description of the forms and uses of the steam-engine would be endless; already, by its extraordinary energies, the most astonishing works have been accomplished. Machinery of all kinds are set in motion; mines are emptied of their contents; carriages of various kinds are propelled on land; and ships are empowered to traverse the ocean by the use of steam-engines: there is little doubt too, if they were employed in aerostation, that for long voyages, steam-engine-balloons would speedily supersede the use of land and water carriage, and that their construction and ascension would delight more, from their real utility, than from the temporary amusement they now afford.

"Mr. Watt was the great improver of the steam-engine; but, in truth, as to all that is admirable in its structure, or vast in its utility, he should rather be described as its inventor. It was by his inventions that its action was so regulated as to make it capable of being applied to the finest and most delicate manufactures; and its power so increased as to set weight and solidity at defiance. By his admirable contrivances, it has become a thing stupendous alike for its force and its flexibility; for the prodigious power which it can exert, and the ease, and precision, with which that power can be varied, distributed, and applied. The trunk of an elephant that can pick up a pin or rend an oak, is nothing to it. It can engrave a seal, and crush masses of obdurate metal like wax before the sun; it can draw out, without breaking, a thread as fine as a gossamer, and lift a ship of war like a bauble in the air. It can embroider muslin, and forge anchors; cut steel into ribands, and impel loaded vessels against the fury of the winds and waves."

The powers of steam are becoming more known every day. Even typography has received its wonderful aid. The Times and other newspapers have for a long time been printed by cylinders impelled by steam, and assisted only by three boys, who are thus enabled to do the work of sixteen men. In addition to the economy in saving manual labour, the otherwise waste steam is carried round the buildings connected with the printing offices, which not only saves a great expense in fuel, but affords that steady and uniform heat so necessary in a printing establishment. Cowper's patent steam-engine prints two sides of a sheet of paper at the same time.

In all mines, the steam-engine is employed; but it is in Cornwall that this wonderful power is used in perfection. There, Woolf's engines, or those of the highest pressure, accomplish works of such magnitude, as hardly to be credited but by those who have witnessed them. Heat and labour are so far economised, that a bushel of coals will perform the work of twelve horses, and raise 6000 hogsheads of water ten feet high!

Mr. Blenkinsop's patent steam-carriages give great facility to the conveyance of coals, minerals, and other articles, and are attended with a material saving of expense. See the annexed cut, which represents coal wagons attached to one of these engines.

These engines are used at most of the collieries. They are so constructed, that by the aid of cranks, fixed at right angles, they put in motion a cogged wheel, acting in teeth cast on one side of the railroad itself, or on a separate rack, by which a very great propelling power is given to the machine; this power is so considerable, that when the carriages are lightly loaded, they travel at the rate of ten miles an hour; but when loaded with thirty coal-wagons, which is frequently the case, each weighing three tons and a half, they are propelled on a dead level, at the rate of three miles and a half per hour.

The use of these steam carriages has given the greatest satisfaction, as it is clearly ascertained that five sixths of the expense of conveying goods by horses will be saved.

The use of steam for navigation in Great Britain and the United States of America, is very extensive.—To propel vessels, steam generally acts upon cogged wheels at the sides.

In America, steam is applied even to the navigation of ships of war. A steam frigate now lies in the Bay of New York, three hundred feet in length, two hundred in breadth, and thirteen feet thick at its sides, which are composed of oak planks and cork alternately; it carries 44 guns, four of which are 100 pounders, the others are from 42 to 60. Besides which, in order to prevent boarding, it can discharge upon its assailants a hundred gallons of boiling water every minute. By the same mechanism, likewise, 300 sabres are moved outside its port holes with the most perfect regularity; and, four times every minute, as many long spears are darted out with the most incredible force, and pulled back every time for a fresh emission.

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[*] A friend, to whom this letter was shown, has promised the information desired. We have too, in hand, a most valuable article on the culture of grape vines, translated from a recent French publication, received at the office of the American Farmer.

The following advantages may be anticipated from the use of steam in the navigation of ships:—

1st. Vessels will not be obliged to wait for weeks or months for a fair wind, to the great loss of time and money.

2d. Neither will they be becalmed at sea, for days and weeks together, in hot climates, to the great injury of the vessel and the health of the crew and passengers.

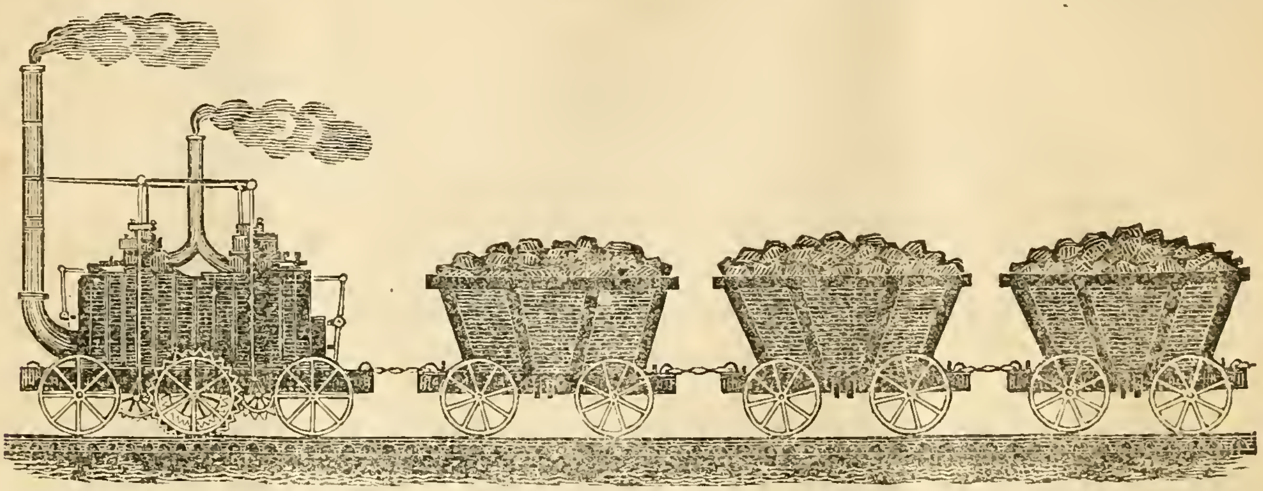
3d. Voyages may be performed within certain limited periods. Markets can be regularly supplied; the public will be benefitted, and the calculation of the merchant will not be disappointed.

4th. The vessel being constructed of great length and breadth, will be steadier in the water, and not liable to be strained by the operation of the wind upon masts and rigging. Goods will be preserved from injury, and passengers from inconvenience and danger.

5th. The expense of the first cost of sails and rigging, and the annual repairs of the same, will be saved; and one-third of the usual complement of men, for vessels of the same tonnage, will be sufficient.

6th. The value of such an agent as the steam-engine, when the vessel has to contend with strong currents, on a rocky lee-shore, will be greatly appreciated. Many a valuable cargo, under such circumstances, will be saved from destruction.

[*Mackenzie's Experiments in Chemistry, Lon.*



MISCELLANEOUS.

ITEMS,

Taken chiefly from late English papers received at the Office of the American Farmer.

Such is the advance upon wool, that we have good authority to state, that three growths of Romney Marsh wool were each sold at the high price of 18*l.* per pack, with every probability of its being 20*l.* before the 1st of March. A short time since it fetched only 12*l.*

The rail-roads now projected, if carried into effect, would consume iron to the value of 28 millions sterling! The 111 miles of read planned between Birmingham and Liverpool will require 60,000 tons of iron for the rails alone, at the cost of 840,000*l.*

Two hundred thousand sheep are stated to have died of the rot in Romney Marsh alone.

Silk Trade.—So flourishing is this important manufacture, that it is impossible to keep pace with the demand for goods. There is a general cry for more hands, and by an advertisement, from 4,000 to 5,000 would find immediate employ, Their instant arrival here might, perhaps, occasion some inconvenience as to the lodging of them, which will soon be obviated, as we have pretty good authority for stating, that not less than a thousand houses are about to be built. Several plots of land have been marked out for the purpose, as well as for the erection of four or five silk factories.—[*Macclesfield paper.*

It appears by a topographical survey taken in the year 1769 and 1770, that the total quantity of land appropriated to husbandry in England, was at that time 32,000,000 of acres—viz. 13,518,716 in tillage, 15,736,185 in grass, 2,395,721 in woods, and 34,938 in ponds, lanes, yards, &c.; which 32,000,000 of acres were let in 570,010 farms, producing an annual rent of 22,400,000*l.*, an average of 14*s.* per acre per annum, and stocked with 684,491 heads of draught cattle, 22,188,948 sheep, 741,532 cows, 513,369 fattening beasts, 912,656 young cattle, 1,711,200 pigs, and 2,161,300 heads of various kinds of poultry; the whole amounting, per estimate, to 39,686,237*l.* The value of the soil, estimated at 31½ year's purchase, was 705,600,000*l.*

A meeting of merchants and others was lately held at Liverpool, for forming a company to effect a direct canal and road communication between Liverpool and London, by means of a combined acqueduct and roadway across the river Mersey at Runcorn, embracing also a direct canal communication between Liverpool and Manchester, through the lines of the Duke of Bridgewater, Sankey, and the Mersey and Inwell canals.

The extreme briskness of trade last year at Liverpool, is evidenced by an official account just published. The excess of 1824 over 1823 is more than 4,500,000*l.* The export of cotton manufactures and yarn are estimated at the vast sum of 30 millions.

Contraband goods are extensively introduced from the Netherlands into France, by the means of dogs trained for the purpose, who convey small parcels through the least frequented paths. The revenue officers have discovered the fraud, and are in the habit of shooting all strange dogs.

The number of English and French steam engines now in operation in France, would appear incredible to persons who remember what it was only a few years ago. At Lyons, and in the neighbourhood, there are at this moment upwards of 100. At Rouen, and other manufacturing towns, they are in the same proportion.

THE FARMER.

Baltimore, Friday, April 29, 1825.

JOURNAL OF INTERNAL IMPROVEMENT.

The outline of the plan of a journal proposed to be published under the above title, was given in No. 4, page 31, of this volume. It was there also stated, that the Editor of this paper had been invited by the Maryland Society for Internal Improvement to take the editorial direction of the work. After mature reflection, he has, however, not felt himself at liberty to accept the invitation, not knowing exactly how far it might interfere with his official duties. These must, at all sacrifices, be performed in a way to give all possible security and satisfaction to the public. He has the satisfaction to believe that they are so executed at present; and it is only when that end is accomplished, that the present incumbent can venture to indulge in what constitutes his chief pleasure, the devotion of his leisure time and humble talents to studies and employment of solid utility to the country. But, if the journal meet with suitable encouragement, he can assure its friends that superior talents will be employed upon it, and that it will be highly worthy of general patronage.

All persons having fine animals for sale at the Cattle Show in June, may give notice, free of expense, in the American Farmer.

The next meeting of the Trustees of the Maryland Agricultural Society, will be held at Doctor Thomas', on Elkridge, on Thursday, 12th of May.

We are sorry to learn, under date of 25th inst., from Charles county, that the fly is making great ravages in the wheat fields.

Valuable Stock—*For sale at the Cattle Show.*

We are glad to find gentlemen adopting our suggestion, to reserve their fine animals for sale at the cattle show in June, and accepting, in the mean time, our invitation to give notice thereof in the Farmer. Of horses, *thorough breed*, we already know of several—amongst them, some of the fine stock of Governor Wright. His splendid horse, Silver Heels, one of the best bred and most beautiful animals ever seen on the American turf, and two fine young fillies, now training for the Canton course in May, will be for sale at the Cattle Show in June. Silver Heels will, in the mean time, be let to mares, at Mr. Hade's tavern, near the Canton Course. We shall give his pedigree in our next.

Of Neat Cattle.—There will be for sale, at public auction, the celebrated bull Champion, imported, together with the heifers, White Rose and Shepherdess, by the Editor of this paper, in May, 1822. The following extract from Mr. Champion's letter of 6th of April, 1822, contains the

Pedigree of Champion.—I had named him *Blyth Union*, in consequence of being bred both from Colling's and Coat's best blood; but I request you will give him any name you think most suitable; if you think he deserves it, I shall be proud for him to be named *the Champion*. He was got by Warrior, for whose dam I had paid Mr. Robert Colling 200 guineas; *his dam* was by Blyth Comet, whose dam I bought at Mr. Charles Colling's sale for 170 guineas; Blyth Comet was also the sire of the ox in my group of animals which you have, and he was bred *in* and *in* from Comet, who was sold for 1000 guineas at Charles Colling's sale in 1810; his *grandam* was by Mr. George Coat's Palmflower, who is own brother to my cow Crimson, for which I gave Mr. Coats 100 guineas when 13 years old, and Crimson is the dam of my bull Blaize by Blyth Comet, which I am now using, and I hope your two heifers are in calf to him, as he is considered the most complete animal I ever bred, for symmetry and quality; *his great grandam* by Patriot, the bull you named in one of your letters, and which Mr. Coats sold for 500 guineas, so that your bull partakes of Colling's and Coat's best blood.

The Maryland Association for the Improvement of the breed of Horses.

At a meeting of the above named association, held in the city of Baltimore, on the 30th ultimo, it was, on motion of J. S. Skinner, resolved to offer the purses of the association exclusively for horses owned *bona fide* within the state of Maryland; and President T. Tenant, the hon. John Barney, and J. S. Skinner, were appointed to publish an exposition of the original views of the association, and of the particular considerations under which the above resolution was adopted—in virtue of which appointment the following views were presented to and approved at a meeting of the association, on Wednesday, the 27th inst.

This society was formed in the year 1823, by many amongst the most public spirited citizens of the state, and the liberality with which it was supported, no less than the zeal with which it was commenced, promised the most valuable results. Though these results have been to a certain extent frustrated, or retarded, by some false steps in the outset, they have not been altogether *defeated*. A number of very promising colts, as your committee have reason to think, are now coming forward under the influence of this association; nor have they, from all they can learn, any reason to fear but that, under its auspices, a general melioration will yet be effected in the stock of that noble animal, with vast profit to the state at large, and to the great comfort and pleasure of all those whose pleasures and comforts are connected with his use.

The clear gain that would accrue to Maryland from such improvement as may easily be made in her stock of horses, would forcibly strike and command the attention of her landholders, if there were any means of computing and showing to them, the vast amount of which the state is now annually drained to pay for horses brought from other states, and which ought, without any additional expens , to go into their own pockets. A serious, and perhaps yet greater loss, is that which accrues from breeding and using animals of unsightly figure, of unthrifty constitution—and of action, both for saddle and harness, heavy and graceless in itself, as it is uneasy and mortifying to the rider. A true estimate of the mere aggregate *waste of time*, in a community whose pursuits and movements are so much associated with, and dependent on the powers of the *horse*, when the breed in use is cold-blooded and slothful, would excite the surprise and awaken the anxiety of those who forget not the saying of the wise Franklin, that *time is money*. Your committee are of opinion, that whether the horse be destined to meet the shock and mingle in the fray of battle, or whether

> "——— in the chase, with emulation fir'd,
> He strains to lead the field, top the barr'd gate,
> O'er the deep ditch exulting bound, and brush
> The thorny-twining hedge,"

for these and all other purposes, his certain improvement and his highest capacities are only to be secured by having recourse to the blood of the thorough bred race horse of Arabian descent. Neither foot nor wind can be relied on but as derivable from that high origin.

The blood horse, says one of the best judges in this country, is originally from a hot climate and arid soil, and where the base-born suffocates with heat, and faints with fatigue, his wind and strength are untouched. His "long slouching walk," says the same accomplished writer and experienced sportsman, "tells on the road and in the plough, especially on a hot sultry summer's day."

With benefits so obvious and valuable, resulting from adherence to the purest stocks, the only thing wanting by the breeders of Maryland horses, was the unerring and indispensable test of a well managed *race course*, to put the genuine stamp on those of highest qualities and greatest power. The great object, therefore, in the view of the Maryland Association was, not so much to stimulate by mere force of *mercenary impulse*, as to open a course for the trial of speed and bottom, under the management of gentlemen whose character would guarantee that these trials should be conducted by the strictest rules of honour and propriety, and that every man of unfair repute should be excluded, and every thing of demoralizing tendency banished from the scene of competition. In short, the Canton course is intended to afford a *standard* to measure the powers of the most promising colts which may be reared in this state, and to give to their skilful and enterprising breeders the means of establishing the characters of such as have powers to *excel*. By this means, and by this only, can the least worthy of the race be ascertained, and condemned to the odium of celibacy and hard labour; while the more highly gifted are reserved for the conflicts and triumphs of the turf, and as their last and highest reward, ultimately turned loose to enjoy the pleasures of propagating their like, and the honour of transmiting their names and memories to succeeding ages. To use an illustration familiar to farmers, the standard erected on the turf is as necessary to cleanse, and purify, and perpetuate the breed of fine horses, as is the sieve to winnow and separate the chaff and other offal from sound grain.

The *faux pas* committed by this association, as experience has demonstrated, was in offering at the *onset* their purses to competitors from other states, where the finest horses, the art of training, and the sports of the turf, inseparable from each other, have been sedulously preserved. These horses, preceded by the fame of their wonderful performances, have come from abroad and walked over our course, and borne off rewards which should only be the meed of the highest mettle and the greatest achievement. The breeders of horses in Maryland, comparatively unprepared and inexperienced, have not ventured to enter the lists where certain discomfiture awaited them; and hence the public disappointment in the beneficial effects anticipated from the measures of this association. Notwithstanding this discouragement, however, your committee are gratified to learn, as before stated, that there are now coming on many thorough bred colts of high promise, which will be ready to take the field and do credit to their owners, under the suitable encouragement and the equal chance of success secured to them by the resolution which restricts the purses to horses *bona fide* owned by citizens of the state of Maryland and the district of Columbia north of the Potomac.

When the sportsmen of Maryland shall have replenished their studs of fine horses, they will be prompt to fling open the gates and challenge competitors from every quarter in the gallant and manly exercises of the course. Finally, your committee solicit with confidence the support of the citizens, and particularly the agriculturists of the state to the further efforts of this association, in the full confidence that it may yet be made to yield all the real profit, and to answer all the valuable purposes for which it was originally designed.

May Races—*Subscription Purses.*—There will be run for, over the Canton Course, on the 25th and 26th days of May next, the following Subcription Purses, free for any Horse, Mare, or Gelding, *bona fide* owned by any person living in the state of Maryland or district of Colombia; to carry weight, &c. agreeably to the rules of the Maryland Association. Any Horse not owned by a subscriber, to pay an entrance of $20.

1st day, 4 mile heats, for a purse of $300
2d day, 3 mile heats, for a purse of 200

And on the 3d day, the Proprietor's Silver Cup, free for Saddle Horses only—1 mile heats.

The Horses must be entered with the subscriber on or before 3 o'clock, P. M. of the day preceding the race.

The Horses to start at 12 o'clock each day, precisely. Gambling on the ground is prohibited.

E. L. FINLEY.

COMMERCIAL RECORD.

Wheat—A load of white wheat has been sold at $1.15 cents per bushel.

Tobacco.—Inspection during the week in the city of Baltimore:

At warehouse No. 1. . . . . . 300 hhds.
At warehouse No. 2. 349
Total. 649

R. W. Bowie, Esq sold a small and inferior part of his crop this week, consisting of 24 hogsheads, of which four were seconds, from near Queen Anne's, for 5 and $7—and eight from his estate near Nottingham, five crop and three second, for $7¼ round.

Havre, March 25, 1825.

When we wrote you on the 1st instant, we stated that our market was firm, without, however, much activity in the sales. We now have to advise that holders of ashes and coffee have submitted to take lower prices. The fall of prices in ashes is due, in a great measure, to the failure of speculators in Paris, who had large quantities, which have been forced into the market. We are of opinion that they cannot remain long at the present rates, of 43 50 a 44 per 50 k.

St. Domingo coffee, which had been eagerly taken up for the English market at 16 and 16½, is now at 15 and 15¼. The greatest part of what is expected is already sold, to deliver on arrival.—Little remains in the market, and we believe that it will rather rise than decline.

Cottons remain very firm. Georgia and Alabama 34 a 36; Louisiana 36 a 39. The imports this month from America have been as yet but 8000 bales, and it is expected will prove a great deficiency, when compared with the same month in 1824. Although the daily sales are not extensive, still our stock diminishes, and we calculate on a continuance of the present rates, as long as our market is kept as bare as it is of that staple.

Campeachy logwood, 14 a 15f.; fustic, 16f.; cochineal, 25 a 27f. in bond.

Rice sells readily at 36f.—duty paid.

Calculation of Import, Export, Consumption and Stocks, in Manchester, for 1825.

The stocks on 31st Dec. 1823. were		bales 383.000
The imports of 1824 were, from the		
United States,	282,000	
Brazils,	144,000	
East Indies,	50,400	
West Indies,	30,100	
Egypt,	32,000	539,500
		922,500
Deduct Exports,	53,000	
Quantity taken out of the ports for consumption,	634,000	687,000
Stocks on hand, 31st Dec. 1824,		235,500

Probable Import of 1825.

United States. The estimated growth, allowing the crop and the produce of the states on the Mississippi to make up for the deficiency of 50,000 bales, occasioned by drought and floods in Carolina and Georgia, is generally taken at not more than	430,000		
Deduct, for native consumption and exportation to the continent of Europe,	140,000		
	290,000		
Deduct 5 per cent. for loss in spinning, owing to inferiority of quality,	14,000		
	276,000		
Add possible remaining stock of the growth of 1823, instead of 30,000, say	17,000		
This estimate will exceed the import of 1824, by 11,000 bales,		293,000	
Brazils. A degree of uncertainty hangs over the imports from thence, but the average of imports of the last four years is calculated upon, which will be equal to the arrivals in 1824,		144,000	
East Indies. It is supposed that the arrivals will be precarious, on account of the state of warfare and the consequent employment of private ships. The imports from Calcutta are expected to be very moderate, and from Bombay less than last year, say		34,500	
Egypt. The calculations extend, including arrivals from various ports in the Mediterranean, to an increase above those of 1824 of 100,000 bales, making	133,000		
Deduct, for decrease of wt. from the average of American packages.	33,000	100,000	
West Indies and other ports. No reasonable expectation exists of any increase in the quantity imported last year,		30,000	601,500
This calculation of import is 162,000 bales more than the arrivals of 1824,			837,000

Probable Consumption and Exports in 1825.

Export. The general impression is, that the stocks in the continental markets, 31st Dec. last, were much below the usual quantity, and that the demand is good, but taking that of last year, will be		50,000	
Consumption. Notwithstanding the report, that the trade held 40,000 bales on the 31st Dec. 1824, more than at the end of 1823, the result has shewn the spinners and dealers (with the exception of a few of the leading houses) to have had only average stocks; taking the consumption therefore of 1824 at, per week,	11,550		
And adding the average increase of 5 years past, which, notwithstanding the advance of prices, may be reasonably expected from the great increase of exports and demand for home use of goods and yarns,	600		
per week	12,150	637,000	
			687,000
Estimated stocks in London, Liverpool and Glasgow, December 31, 1825,			150,000
Against the stocks in the same places, Dec. 31, 1824, of		235,500	

SEEDS, PLANTS, AND GRAIN,

Deposited since last notice with the Editor of the American Farmer, for the use of his subscribers.

A Plant of the Everlasting Pea, six feet in length, the growth of this Spring in open air, from Mr. Moore, with the following note:

Dear Sir,—I take the liberty of submitting to your inspection, a specimen of the Everlasting Pea, or Vetch, (*Lathyrus latifolius.*) The plant from which it was taken, is now of four year's growth from the seed; in a lean or thin soil, and has seventy-eight shoots of this year's growth, of from ten to thirty-six inches in length. Being a lover of nature, and delighted with your exertions to embellish, improve, and enrich our common country with all that is valuable, both of foreign and domestic growth, I feel a pleasure in calling your attention to this Vetch, as a beautiful and most valuable plant for early and steady pasture; believing that it would afford, if planted in drills, about two feet apart, more nutritive sustenance for domestic animals, and for a greater number of years than most of the plants or grasses. generally cultivated. With a hope that it may have a fair trial and prove useful.

I remain your most obed't.

Baltimore, April 27. HENRY MOORE.

A species of Guinea Corn, apparently; from J. Middleton, Esq. found among some Turkey figs.

GARRICK,

An imported *full bred* Devon Bull, will stand this spring and summer at the first Toll-gate on the Baltimore and Harford Turnpike Road, and be let to cows at *five* dollars each; the money in every instance to be sent with the cows, and for which a warranty is given.

Garrick was purchased under this name last summer, at one year old, from the celebrated stock of Mr. Childes near Bewdley. who has for some years been the most extensive and successful breeder of North Devon cattle in England. and Garrick was acknowledged to be his best yearling at the public sale in September last; he is by *Prize* out of *Fill-Pail* as per catalogue and pedigree which accompanied him.

April 2. JOHN BROWN, *Gate-keeper.*

CONTENTS OF THIS NUMBER.

Proceedings and Report of the Union Agricultural Society—Agricultural Society of Albemarle—Fruit Trees—Docking Horses—Twin Calves—Method of preventing Dogs killing Sheep—To destroy Tobacco Flies—Prospect for Crops—Solanum Tuberosum, *Potato*—Culture of the Vine—Scuppernong Wine—Milk Pans—Locomotive Steam Engine—Miscellaneous Items—Editorial—Maryland Association, Races—Sale at Cattle Show—Commercial—Advertisement—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	6 50	8		
COFFEE, W.I. Green, .	—	17	21	20	25
do. Common,	—	15	16	18	
COTTON, Louisiana, &c.	—	22	26		
Georgia Upland, . . .	—	22	24		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	10	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32	33		
FISH, Herrings, Sus. new	bbl.	2 25		2 50	
Shad, trimmed, new,	—	6	6 50	7 50	
FLAXSEED, Rough, . .	bush	80	85		
FLOUR, Superfine, city,	bbl.	5 12	5 25		
Fine, ...	—	4 87			
Susquehanna, superfi.	—			none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	39	41		
Wheat, White, ...	—	1 05	1 10		
do. Red, ...	—	1 00	1 02		
Buckwheat, ...	—	55	75		
Rye, ...	—	37	40		
Barley, ...	—	50			
Clover Seed, ...	—	3 25		3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—			none	
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	9			
LEATHER, Soal, best,	—	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 50		1 75	
Pitch, ...	—	1 50	1 75	2	
Turpentine, Soft, . .	—	2	2 50		
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime. . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	35	50		
RICE, fresh, ...	c.lb.	3 50	4 25	5	
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	23	25	37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—		27		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	
do. Brown, . .	—	10			
Louisiana, ...	—	9	10 20		
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Ground Alum, ...	—	50			
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

NATURE AND REASON HARMONIZED IN THE PRACTICE OF HUSBANDRY.

By the late John Lorain.

[Under the above title, a very valuable work has been recently published, by Messrs. Carey & Lea, of Philadelphia, for account of Martha Lorain, relict of the deceased author. It consists of 550 pages octavo, and is divided into four books, under these general titles: Book I. *On Manures and Vegetation.* Book II. *On Cultivation.*—Book III. *On various subjects.*—Book IV. *On Gentleman Farming.* The books are divided again into chapters, in all fifty-two—embracing almost every subject within the range of American husbandry. Though there is to be found in the work much of the *philosophy* of agriculture *that* is introduced in a language and manner calculated to give greater value and effect to the *practical* remarks and illustrations of the writer, it is, in truth and essentially, a *practical treatise* on subjects of the most general and indispensable moment, to every man whose fortune it is to look for his sustenance to "mother earth."

That our readers may be the better able to judge for themselves, and with a view of making better known and more effectually recommending it to the *reading* portion of agriculturists, (which, we trust, is every day increasing,) we shall take the liberty of inserting two or three chapters. The work is well printed and well bound, and for sale at $3.50, by our neighbour, Edward J. Coale, Esq.]

BOOK II.—CHAPTER XIII.

The practice of ploughing from and to plants considered, and its injurious effects explained. The expanding force of fermentation cannot be powerful where a sufficiency of animal or vegetable matter does not obtain. Of the marked fertility arising from ploughing in buckwheat, or turning up a clover lay from a wheat crop. The depth of ploughing should be in proportion to the animal and vegetable matter contained in the soil.

Ploughing from and to fallow plants has been highly recommended by gentlemen of the first agricultural talent. It is said to be still extensively practised in England, by the most enlightened agriculturists in that country. Names may, and too often have, the power to sanction and perpetuate error. They cannot, however, change the nature of things, or make any practice right, if it be opposed to nature and common sense.

Doctor Anderson advocated this practice, and furnished an engraving of the lines, by which this mode of cultivation might be executed in the most ingenious way. His plan turns the soil to the plants on one side of each row, and from them, on the other side of it. As the ploughing is reversed every time the crop is cultivated, the roots of the plants are alternately cut off, and left exposed on one side of the row; they are by this means always covered, on one or the other side of each row; therefore this gentleman s practice is not quite as much opposed to nature and reason as Mr. Bordley's. He recommended ploughing from the plants on both sides of the rows, in the same cultivation. This gentleman says, "observing much irregularity in the standing of maize in rows, I caused the seed to be placed close to the land side of the furrows; the maize thus grew very straight in lines, and admitted the plough to pass near the plants. These being up and a little grown, the design was formed of directing the finger-like roots to dip deeper than common before the lateral roots should strike out. The soil was ploughed five inches deep, and turned at the first ploughing from the maize, on both sides of the plants: but they then being young, it was necessary to leave more shoulder or bed to them than was desired, to avoid burying them with the earth falling back; therefore, the plough, on having worked through the field, immediately returned to the place where it began to plough from the plants, and it now took off as much more earth, still turning it from them, on each side, as they could well bear without danger of tottering." This is a tedious piece of business, as are most other things opposed to the economy of nature and to common sense. But to proceed—"All now rested ten or twelve days, even in the driest weather, with intention that the lateral roots should take their direction under the artificial surface of the ground formed by the ploughshare. The ploughs next turned a furrow, on each side of the rows, to the plants, through the whole field; and then ploughed through the balks, or the whole of the intervals not before ploughed; and so repeatedly continued to plough through the intervals from and to the plants. The alternate ploughings from and to were continued, even during the forming and filling of the grain, and it was continual work for the ploughs, in which the ploughshare passed rather over the roots, which spread and ran deeper than if they had taken their first start under the common surface of the earth, and therefore they were not torn up, or the plants fired or checked in their growth."*

Mr. Bordley ploughed from each side of the rows of the plants five inches deep, while the plants are young; he then let them rest ten or twelve days on the narrow ridges formed by this practice; this was done, that "the lateral roots should take their direction under the artificial surface of the ground formed by the ploughshare. If the corn plant, when scarcely three inches high, be pulled up by the roots from an open free soil, the lateral roots will be found about twelve inches long, beside what remains in the ground; consequently these roots are cut off on each side of the rows, even by the first cultivation, while the plant is yet very young; they are also cut off by every succeeding cultivation. If the furrows made along each side of the rows, by the first cultivation, were kept continually open, and the lateral roots of the plants compelled by this means to cross the bottom of them, a little within the ground, this would not cause the roots to grow under the artificial surface of the ground formed by the ploughshare." Nature, immediately after they passed the open furrow, would direct them up into the soil above, to take their natural range through it: especially in that part of it, where the most genial heat and nutriment obtained. This is clearly seen when the lateral roots of trees cross ditches, or even deep gullies, at the bottom of them, a little within the ground. They immediately mount upward after they have crossed the bottom of the ditch, and take their natural growth at the same distance from the surface of the soil, as would have happened, if they had met with no obstacles in getting into it.

The roots of the corn plant which proceed downward from the stalk, also those that take their course along the rows, are not injured; neither are all those which grow the deepest within the soil in the intervals cut off. Therefore as the corn plant is very hardy, it is supported by these roots, until nature repairs the damage done by this truly inconsiderate and barbarian practice. It is of consequence by no means wonderful, that Mr. Bordley, who was in many respects a judicious farmer, should by his general good management, so far counteract the evils arising from this savage practice, as to grow, under all the disadvantages resulting from it, crops that were more than equal to the general crops of his neighbours. Reason, however, as well as practice, determines that crops obtained in this way must fall very far short of those that may be obtained from a rational system of management. It is also obvious, that his mode of cultivation is well calculated to cause an extensive, useless waste of the animal and vegetable matter contained in the soil. Likewise of the farm yard manure, if that be applied for the growth of the crop.

Respect for Mr. Bordley's opinion induced me to try his practice. The cutting of the roots of plants, (as might and ought to have been expected,) is very injurious to the crop; the more so, as it exposes that part of them which remains attached to the stalk, to the injurious effects of the sun and air, admitted by leaving the furrows next to the plants open. Fermentation is also much checked, by frequently turning up the soil, and admitting too much air; and the decomposed matter arising from it is subjected to the useless waste that has been before described.

The undecayed vegetable substances are dragged up by the harrow into heaps, where they perish on the surface of the soil, and do but little good to it.

Reason, if it had been properly consulted, would have been sufficient to convince me, that cutting the roots of plants, was in itself an irrational practice; still I tried Doctor Anderson's mode of cultivation; this cuts the roots, also leaves them, either on one or the other side of the rows, exposed to the injurious effects of the sun and air, until he tells us the plants ought to be earthed up. However, one trial of this very plausible, pulverizing system, (perhaps formed in the Doctor's closet,) was sufficient to convince me, that the roots of plants ought not to be cut in any way, even while they were young: also, that it was irrational to turn the earth away from them, especially as nature had constructed them to grow in it.

Some cultivators, in order to make the soil open and mellow, turn it from the plants into the first cultivation, but after harrowing well, turn it immediately back to them, least injury might be done by leaving the roots exposed. This is a more rational practice than either of those just mentioned, but it is laborious and also imposing. The open texture of the soil is obtained at the expense of the roots of the plants and the useless waste of the animal and vegetable matter contained in it. As fermentation is greatly checked by this practice, the soil (unless it be sandy or very rich,) settles, and becomes harder than it would have been, if the grounds had not been so carefully pulverized; especially if heavy rains follow this inconsiderate and laborious practice.

It should, however, be recollected that the powerfully expanding force of fermentation, cannot exist in a soil where perpetual ploughing and cropping has destroyed too much of the animal and vegetable matter that had formerly existed in it. In this case a sufficiency of vegetation ought to be introduced, by red clover and the use of gypsum. Or if the grounds have been so often excited by that substance that it will no longer cause good crops of this grass to grow on them, without the aid of enriching manure, such other plants as the soil will grow, should be cultivated and ploughed under for manure. When as much vegetation is procured from an exhausted soil as it is capable of producing, and also as much animal matter as may be obtained from the cattle grazed on it, and the animalcula which are fed and sheltered by it, the next thing to be considered is, how this scanty product may be most advantageously used, and with the least possible expense. The quantity of inert earth is often very great in proportion to the animal and vegetable matter derived from the green crop grown on it: therefore but little comparative good is to be expected, unless this manure be so applied and ordered, that the whole expanding force and enriching matter contained in it, be expanded within the soil to the best advantage. However, if this be done, the benefit derived from it, will be found much greater than has been commonly obtained from ploughing green crops under the soil, for the growth of fallow crops.

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* See his book on Husbandry, pages 101, 102, 103.

To illustrate this, I will again refer to buckwheat. That plant is too often threshed on the field where it grew, and the straw left in large heaps to perish, with but little ultimate use to the cultivator. We may observe, after the straw has been decomposed, that the remaining matter is very little, when compared with the original bulk of the heaps. This, together with the evident texture of the straw, seems to determine that water forms a very considerable proportion of the plant. It of consequence contains much less nutritive matter, than most of the plants ploughed under the soil for manure. It has, however, notwithstanding this, been ploughed under with very great success, for a wheat crop; especially in England. Now we all know that although the wheat will stubble, fall, and become unproductive, when too much manure is applied for the crops, still much nutriment is required to grow a good crop of that grain. Why, then, does a crop of buckwheat, ploughed under the soil, supply sufficient nutriment to effect this purpose, when it clearly appears to furnish but little nutritive matter for the growth of plants? The reason is obvious, and the principle highly important to the interests of agriculture, if farmers would make a general and proper application of it. After the buckwheat is ploughed under the soil, it remains undisturbed by folly, and the injurious and very expensive labour too generally used when fallow crops are cultivated: consequently fermentation keeps the soil open and mellow for the roots of the plants, and decomposition supplies them with nutriment. As none of the enriching and fertilizing matter, arising from the decomposition of the green crop, is uselessly wasted in the way that has been described, the product is as abundant as could be rationally expected from the properties of the manure. It therefore seems that quite as much (if not more,) depends on the proper use of manure, as on the quality or quantity applied; especially as we all know that a clover lay is an excellent preparation for wheat. If the ground be well stored with the roots of this plant, the crop seldom fails to be productive, even when the soil is thin, provided the seed for the grain crop be sown on one ploughing. On the contrary, if the lay be prepared by repeated ploughings, the crop is seldom good, unless the soil be rich enough to supply the great loss sustained in consequence of exposing the enriching and fertilizing matter contained in the clover roots, to useless waste. This fact has been often and well confirmed, by sowing one part of the same clover lay on one ploughing, and the other part after the grounds had been oftener ploughed. Although the cause of this marked difference ought to be known, it certainly has not been sufficiently considered; especially in the different application of clover and other grass lays, or a more general and far better application and cultivation of them, would have been adopted. Gypsum, even when the soil is very thin, causes the clover to grow luxuriantly. The tops we know to be very nutritive, and have every reason to believe that the roots are not less so, as far as the food for plants may be concerned. When the clover has not been injured by being too frequently mown or closely pastured, the interior of the soil is well filled with its roots, and the surface of the ground is as regularly covered with the tops of the plant. As it cannot (like the speargrasses,) live after its roots have been reversed by the plough, a general fermentation quickly takes place; and as this is not checked when small grain is sown on one ploughing, the crop is generally as good as might be expected from this judicious, and of course rational practice.

Why, then, should we spend so much money in useless and very injurious labour, when it is evident, so far as the practice has been generally tried, that if we place the necessary materials properly within the soil, and subdue the grasses and weeds on the surface of it, by the very easy and effectual means that have been described, nature will keep the interior of the soil more open and mellow, for the growth of the plants, than can be done by us with the plough? It should be also recollected, that by the use of this instrument, we cut and rend the roots of the plants, and by turning up the nutritive matter, expose it to much useless waste.

It is, however, considered proper to remark, that notwithstanding it clearly appears from the practice of turning a clover lay, and ploughing in buckwheat for a crop of small grain, that but little nutriment will produce surprising effects when it is properly ordered, still the amount of the green crop ought to be sufficient to keep the earth open and mellow. This being the case, it is evident that a thin soil should not be ploughed deep, when the vegetation is turned under it, unless a sufficiency of farm yard, or other enriching manure, be added, to keep the soil open and mellow, or the ground, below the usual depth of ploughing, is found to be richer than the soil which has heretofore been employed. This last I have never seen, neither can it happen, except in soils originally very deep, but so long ploughed and severely cropped, that the upper part of them has been exhausted. The idea of bettering or enriching poor soils generally, by deep ploughing, and exposing the inert earth to the enriching influence of the atmosphere, is certainly very erroneous.

The poor inert earth, thus exposed, will imbibe some enriching matter from this source: still, it will be much less than if the grounds had not been deeply ploughed. Such a large body of inert matter cannot be kept open and mellow by the fermentation of the green crop grown on the grounds. Covering this vegetation so deeply under the thin soil and inert earth, will greatly retard the fermentation of it. It is evident that plants grown on this bulky and inactive mass of matter, cannot be sufficiently luxuriant, either to gather or secure by their shade, any thing like as much nutriment from the atmosphere, as would be obtained from it if the depth of the ploughing were calculated to suit the depth of the soil. In the latter case, the quantity of inert earth would be so much less, that the fermentation of the green crop would be sufficient to keep the soil open and mellow. The roots of the plants will also soon penetrate the decaying sod, where they will find sufficient nutriment to cause them to grow as luxuriantly as might be reasonably expected from the means employed. Healthy, vigorous plants require and obtain much more nutriment from the atmosphere than feeble ones They also far better defend, by their more extensive shade, the enriching matter that has been deposited on the soil, in the way that has been before described. The better crops will also furnish much more offal vegetation for litter. The grasses following them will be much more luxuriant: consequently, the shallow ploughing will return much more enriching matter to the soil. This will enable the cultivator to plough something deeper at the commencement of every succeeding round of crops, until any reasonable depth of ploughing may be performed, without doing injury either to the crops or the soil.

Some gentlemen urge, that turning up the inert earth by trench ploughing, ameliorates it. They ought, however, to have considered, before they recommended this very injurious practice, that this amelioration is principally effected at the expense of the enriching matter contained in the soil above. By ploughing and harrowing, it is always more or less mixed with the poor earth turned up from below it. This spreads the fertilizing matter contained in the soil thinner, or wider apart: consequently, causes fermentation and decomposition to act much more feebly, and to progress much slower than if this matter lay closer together. Mr. Bordley says, he has "stripped the blades and cut off the tops when the corn was nearly soft enough for roasting ears;" and that "no difference was observed between this and the rest." If this gentleman had measured the product, he would have seen a marked difference.

It was discovered early in August, 1810, that proper grasses for soiling my cattle would soon be very deficient; and on the 20th of that month one row of corn, in a field of thirteen acres, was topped, to ascertain how the plant would bear early cutting. It was thought that it had received no injury. On the 31st of the same month, I commenced feeding the cattle with the tops, cut daily, as wanted. These lasted them until the 18th of September. After this the blades were stripped, commencing where the topping began. They fed the cattle until the 5th of October.

In the process of topping and blading, one row was left entire, standing between the row which had been topped on the 26th of August, and another row that was topped on the 2d of September.—These three rows were cut off by the roots on the 2d of October, and hauled in and set up separately under my own inspection. They were husked and measured on the 8th of November.

Produce of the row that had not been topped and stripped, nine bushels and five-eighths of corn in the ear.

One of the rows which had been topped and stripped, measured seven bushels and six-eighths; and the other topped and stripped row, measured seven bushels and three-eighths of corn in the ear.

Thus it clearly appears, that mutilating the corn plant before its fruit is perfected, is a very injurious practice. The injury done to my crop by this mode of management, was clearly seen some time before the three experimental rows were cut off. Throughout the whole field, the husks were generally dry and open, except on the row which had not been topped and stripped. On this, they still retained a greenish hue, and were close set to the ear when the plants were cut off by the roots.

In 1811, I selected three rows of maize in the middle of my field, as nearly alike as possible. The plants were then about two feet high. I cut off the tops of the middle row as low down as might be readily done without injuring the tassels, which were wrapped in their own leaves within the stalks. I could not observe that the stalks, in the row which had been cut, grew any thicker, until new leaves had been formed from the crown of the plants. Before this happened, the stalks in the rows on either side of it, seemed to be as thick again as those standing in it; and the ears grown on the plants in this row shot, filled, and ripened, about two weeks later than the rest of the field.

As several writers on agriculture had asserted that the tops of potatoes might be cut and given to the cattle, without injury to the crop, I cut off the tops from a row running through the middle of a very luxuriant patch. Care was taken to cut them in that way which was supposed to be least likely to prove injurious to the future growth of the plants. The debilitated appearance of the second growth of the tops, determined me not to risk a second cutting of them. When the crop was gathered, the roots in the row that had been cut did not seem to be more than half as large as those in the rest of the patch.

In fact, I have never seen any advantage arise, either from carefully trimming, or ruggedly mutilating, annual plants; on the contrary, much injury certainly follows. It is, however, probable, that good housewives and ignorant gardeners will continue to tread and mutilate the tops of their onions, as long as the world may happen to last, for the express purpose of making the roots grow much more luxuriantly; unless, perchance, they may happen to

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[*] See his book on Husbandry.

reflect, that the tops would not have existed, if nature did not consider them as necessary to the well being of the plant as its roots. Certain it is, that the writings of many gentlemen, who ought to have known better, are exactly calculated to confirm them in this truly savage practice.

BANKING WITH THE SPADE.

Together with a thing, or two, on the subject of wooden soaled shoes—reclaimed marshes, &c.

Mr. Editor,

The great value of wood in this part of the country, together with the perishable nature of its fencing, (locust, cedar and chestnut excepted, which are very expensive,) induced me to try an experiment in banking and ditching, for the purposes of enclosure. I first cut a ditch of five feet in width and three feet in depth, and leaving an offset of nine inches, sodded the face of the bank, fronting on the road, of a western exposure. The bank was topped by a fence of two old rails. The sodding has stood well the effect of three winters; the offset peeled away by the post, which has induced me to dispense with it, and sod entirely to the bottom of the ditch. The height from the bottom of the ditch to the top of the bank, is now eight feet; two rails make about two feet more, which is ten feet in the whole. An enclosure thus made is proof against the inroads of all kinds of trespassing animals. If the puncheons are of locust, and the rails chestnut, will last, with very trifling repairs, for half a century; where locust and chestnut cannot be had, the oak railing will last at least twenty years. Very many advantages might be detailed as belonging to this mode of enclosure. Nobody burns it—nobody steals it, and if any part should fall down, it will remain where it falls, till put up again. I would recommend the banks to be made early in winter, so as to become well settled, before dressing and sodding in the spring. If the crown of the bank was to be opened with a trench, and then filled up with good mould, and cedar being sowed therein so as to produce an hedge, the effect would be beautiful, and the whole work an affair for posterity.

Of the wooden soaled shoes, my dear sir.—They have done most famously. Of all the modern economics, they are the chef d'œuvre. My leather dealer's account has stood for the last three years, in proportion to the times of leather soals, as 50 to $200—say 75 per cent. My people at first apprehended broken shins, broken necks, and all the "ills which flesh is heir to"—but now declare that nothing would induce them to return to leather bottoms. This fact is bottomed on the experience of three winters, and very wet ones, and the rogues now admit that their feet are always warm—which, in former days, were always cold. I have made an improvement in the mode of ironing these shoes, using broad headed nails in preference to the plates, which were more liable to be knocked off on the frozen ground.

Of reclaimed marshes only a word, as my paper tells me that I have my full share of communication to one number of your valuable work. I attacked an ash pocosin, with Irishmen, some four years ago, dyked and ditched it, with a dyke of 12 feet at the base, and 3 feet high, and a ditch of 8 feet in width, which kept out the tide, and drained the surface sufficiently for cultivation. In March a part of it was standing in wood, inhabited by vermin of all sorts. The wood was cut off, the brush burnt, and the first of June, men brought on their backs bales of corn plants (previously sown for the purpose,) without horse, plough or hoe—they made a hole with a sharpened stick, and thrust in the plants, all of which lived and flourished, and after receiving two hoeings to keep down the weeds, the crop ripened to the tune of at least 20 barrels the acre. The corn stood on an average of two feet and a half apart, two stalks in the hills; it grew in height from 10 to 13 feet, and was perhaps as splendid an exhibition of agricultural luxuriance as any country ever witnessed. It was indeed a tangled forest of corn. Judicious men rated the crop at more than I have ventured to mention, fearing that some agricultural reviewers (for we have Jefferys in farming as well as writing,) should say—this wooden shoed fellow means to hoax us with his crop made without seeding, ploughing or tending. Softly, my masters, "I cry your mercy," till I tell you something about an *ash pocosin*—when I am sure your wonders will cease. An ash pocosin, is not an affair of mud and bullrushes, as most marshes are, but a collection of vegetable matter, decaying since the time of father Noah, and forming the richest vegetable mould it is possible to conceive. The depth is unknown; a pole forced down twenty feet, finds no diminution of richness, and it may reach the central regions of Cleve Symmes, for aught we know. A part of this reclaimed land was put in oats, and sowed at the rate of 8 bushels to the acre, but it all fell down and made nothing. A vast crop of the sapling clover and timothy grew for one year, but the weeds took possession the next year, and destroyed the grass. Stock kept constantly on this land is a great advantage to it, giving it firmness, and preventing the growth of weeds and wild plants of various kinds. In this case the green sward soon roots out the wild growth, and gives the very finest pasture. The dykes are always planted with pumpkins, and afford a very great crop. Grubbing is not only unnecessary, but prejudicial, leaving the ground in holes; the ash trees being cut close to the surface, the stumps will rot in three or four years, and become undistinguished from the other mould; ploughing may then be done as in other lands.

Are there not at least 100,000 acres of this pocosin land on most of our fresh water rivers. I verily believe, that if properly reclaimed, and put in corn and grass, these lands would raise more product of both, than all the other lands in the counties to which they are attached. One trunk or flood gate will suffice for a pocosin of an hundred acres. The annual cleaning out of the ditches, affords a supply of the finest manure for the improvement of uplands. In a word, these invaluable lands, when properly reclaimed, afford a certainty of the most enormous products, not liable to the mischiefs of drought, as they need not a drop of rain, easy of cultivation, and lasting as time.

I will soon send you a very long-promised treatise on sheep, particularly the Sea Islanders—and am, with best wishes for the continued success of your valuable work,

Your friend, &c.

GEO. W. P. CUSTIS.

Arlington House, 24th April, 1825.

ON THE IMPROVEMENT OF SHEEP AND OTHER DOMESTIC ANIMALS.

Frederick county, Va. April 22, 1825.

Dear Sir,

I enclose you, with a few hints in our way, my subscription so justly due to the American Farmer for its punctual receipt and valuable contents. The importance of such a journal is becoming daily so manifest, that its friends cannot but rejoice in its success—the sceptical give way to clear demonstration. It must be acknowledged, the 7th volume has commenced with great interest, by ushering in plans with such spirit for the improvement of our domestic animals, especially the much neglected one carrying the fleece. Now that the chiefs of the nation have given the formal sanction of their names to active enterprises, and experiments in rural economy, we may hope such subjects will be more fashionable; be estimated by the heretofore lukewarm and indifferent about them, and that none will say, "let such matters take care of themselves, all will be right in time"—but will assist with their mind and estate, substantially, to give all due honour to that celebrated and comprehensive sentiment, "that in this western hemisphere there is a new world of matter for a new world of mind." The notice of an association, in the last Farmer, for the improvement of wool, headed by the President of the United States, and followed by a number of distinguished characters, which I have just read with great satisfaction, has induced me to take the liberty of suggesting, whether so important a branch of the internal improvements of our country as may be included under the head of live stock, &c. &c. might not with propriety engage the deliberations of our national councils, and employ their appropriations, at least so far as to authorise an agricultural embassy to Europe. Now, permit me to take the advantage of great names and useful schemes, in proposing one which I humbly apprehend may be made general and national in its effects:—Let at least three persons be selected, one from the eastern, another from the middle, a third from the southern and western states, for the purpose of touring it through the cultivated parts of the United States, to ascertain what may be the deficiencies and wants of this country in agricultural economy, which may probably be supplied by the advantages of the old countries of Europe—and thence repair for the important purpose of examining and comparing the one with the other, in order to determine how far, in what manner, and at what cost, it will be expedient for the people of this country to import domestic animals for the improvement of their own—and make their report, adapting, to the best of their judgment, the various breeds and grades of animals to the different uses, climates, and circumstances, they had met with in their own country;—it is then that individual enterprise will act with confidence on the best authority, and the legislatures of the states might, with an unquestionable policy, make such appropriations as in their discretion they would think fit. The importance of being better acquainted with our own relative resources, in regard to live stock is very great—how frequently does it happen that some individual farmer has a stock far more valuable than his neighbours? and from an ignorance and apathy on the subject, they derive no benefit—a comparison then, in the progress made by the different states, would, by producing interchange, be of signal advantage. Chancellor Livingston, of New York, so distinguished for his knowledge on the subject of sheep, gave it as his opinion, that the middle states were better adapted to the raising of them than any part of the Union; and I am persuaded, that a considerable portion of the south and west would be equally so. Then, why not extend the limits of the association, and have the place of its meeting more central? Would it not be desirable to make the seat of government such place? However, I rejoice to see the subject assume so much importance as it already has, supported by wealth and enterprise, not doubting the example will be soon followed in other sections of our country.

REMEDY FOR HOVEN SHEEP AND CATTLE.

Easton, Pa., April 20, 1825.

Dear Sir,

In page 28 of your present volume, a Fredericksburg correspondent states the loss of four fine sheep from eating too freely of clover, into which they had been turned, and inquires, "have any of your correspondents experienced a similar loss from the same cause? And is there any cure when attacked?"

When a boy, at home on my father's farm, the sheep flock was under my particular care, and in more than one instance, some of them had eaten too freely of clover, and had all the symptoms of being hoven. The remedy which I applied was, simply to tar a piece of rope and tie it in their mouths, and success uniformly attended the application. I am not able to state *scientifically* how the cure was effected, but suppose, that the disease is owing to wind in the paunch, and the tar occasions eructations, by which the wind is discharged and the animal relieved.

I have known the same remedy applied to horned cattle with like success. In fact, I never knew it fail.

When horned cattle are attacked, I have seen them relieved by making a hole with a knife or other sharp pointed instrument, in the side of the animal, and into the paunch, so as to let the air escape in that way. I have known this operation to be performed successfully, but we never, on our farm, did any thing more in such cases, than merely to apply the tarred rope.

In turning cattle or sheep into clover early in the spring, care should be taken if the clover is rank, that they should not be turned in while there is much dew or wet on the clover, as when in that state it has a much greater tendency to wad, and injure them. They should also be driven about continually for 15 or 20 minutes after being turned in, to prevent their eating too greedily, and thus injure themselves.

Very respectfully yours.

ON THE MANAGEMENT OF MILK COWS AND REARING CALVES.

Carrington, April 27th, 1825.

Having read a good deal concerning fine cattle, Short Horns, Alderneys, Herefordshires, &c., and little wrote or published on the subject of making and managing them, I have given you my plan, and should any of your readers put me in a better way, shall be much indebted to them.

A cow, before calving, should be tolerable beef. I never had a cow that was lean and weak at the time of her calving, that ever milked more than half as well as she did when she was fat and of course strong. A good cow should give at least 9 to 12 quarts of milk at a mess, and *it is impossible to get a poor cow strong,* while giving the above quantity of milk; this shows the necessity of having cows in proper order before they calve, and lays the foundation for raising fine calves. To have cows in proper order, costs no more in the end than poor keeping, and *a cow that dont pay for proper keeping should not be kept for milking.* I give my milk cows, in the fall, chopped pumpkins and a quart of corn meal twice a day; when the pumpkins are all eat, a bushel of clover hay, cut and scalded or steamed in a hogshead and a quart of meal twice a day, with good hay and corn-fodder three times a day, and the fresh calved cows double that quantity of corn meal, with warm clean stables. I keep my cows milking all winter, and until 2 or 3 weeks of their calving; *continuing to feed them until they calve;* the butter and milk amply pays the expense and trouble, and my cows in April look like stall-fed beef. I tried a cow that made me 10lbs. of butter per week, from the 20th of May to the end of July, (she was milked three times a day,) was fat when she calved in 1822. I then lived in town, and had no other cow. Next year she was only in middling order when she calved, and after calving had as good keeping as she had in 1822, but could not get more than 7lbs. per week. I thought she was passing her prime—in 1824, had her fat again when she calved, and she made as much butter as in 1822. I think this clearly proves the propriety of what is above stated.

To raise calves—the great point is to keep them from purging, or being too loose, after weaning. They are very subject to this; owing, I believe, from giving them too much to drink at a time of skim milk, just warmed; it is difficult to stop it, before they are old enough to eat oats, and always stunts the calf. My method to feed a calf and raise it, is, to let it suck the cow for a week, milking the cow before the calf sucks, *so that it may get the best milk:* when weaned, I boil the milk and let it stand to cool, before giving it—simply making the milk warm is not near so good, and brings on a looseness; after a week, I tie up a bunch of the sweetest hay and hang it so as to swing about when the calf touches it—this will induce it to smell and play with it, and it soon begins eating it; give it ground oats and corn meal in a trough or tub, it will soon lick and eat it. The milk should be given three times a day, the hay once, and meal once; two quarts of milk is sufficient for a meal three times a day, more at once brings on the skit or looseness, which is the worst thing that can happen to a young calf; the quantity to be increased after a month old. The first winter, the calf should be kept on the best hay, with potatoes, turnips, mangel wurtzel, or some juicy esculent, in quantities sufficient to keep its skin loose and give it an appetite for the hay; it should be kept dry and clean, but not warm, the latter filling them with lice, which is very injurious to them—an open shed is best for them, kept well littered The second winter, they may run in a yard, and be fed with coarse hay. They may take the bull when 15 months old, sooner stunts them.

Calves should be kept separate, otherwise they suck each other s ears, and teaze one another when they should lay quiet and sleep.

Truly yours,
THOMAS MASSEY.

PROSPECT OF CROPS.

Hall's ✗ Roads, 30th April, 1825.

Until within a few days, my prospect for a good, *very good* crop of wheat was most promising; observing it to assume a yellow appearance, I yesterday examined it, and find that almost every stalk contains a small white worm, about 1-8 of an inch (some smaller) in length. I supposed it was the Hessian fly, in one of its many stages; but on further examination, with a microscope, together with the opinion of my neighbour, Dr. Davis, an enlightened and scientific gentleman, as well as one of the best practical agriculturists we have, I am satisfied it is not the fly, but an insect equally destructive wherever it makes its attack; its location is in the hollow of the stalk, just above the surface of the ground. I hope its ravages may not be general through the country; but as I have not been from home for some time, am unable to say to what extent it is in this county.

I have lately purchased a considerable quantity of ashes from Hyde's soap factory;—can you inform me what is the proper quantity to apply upon an acre?* The parcel I have contains a considerable portion of barilla. Herrings are much used with us as a manure, 22 to 25,000 per acre being sufficient, is found cheaper than almost any other that we can apply. When purchased, the price is from 25 to 35 cents per 1000; but several on the water have small seines of their own, and catch them with their farm hands.

Extract of a letter dated Sneedsborough, N. C. 10th April, 1825.

"The spring opened very early with us this season. The wheat and barley were in head on my plantation two weeks since. We had, after ten days of fine weather, a sharp frost on the 4th inst., but its effects were only visible on the tender leaves of the persimmon tree.

Yours, respectfully,
H. W. HARRINGTON."

AGRICULTURAL INQUIRIES.

Wayne county, (Georgia,) 15th April, 1825.

Mr. Skinner,

You will do me a favour, to have the goodness to inform me what will be the cost of a cob mill, to grind corn with and without the cob.

[The Editor will thank any manufacturer of such mills to enable him to answer the above inquiry.]

HONOUR WHERE HONOUR IS DUE.

Extract to the Editor, from one of the Trustees of the Massachusetts Agricultural Society.

"In reciting the good deeds of Admiral Sir Isaac Coffin, and he certainly has done nobly—you give him credit for giving us the English *Dray Horse Columbus*—that is a mistake; it was presented by his brother, General Coffin; and I am very certain, the Admiral himself would thank us for correcting the error." G P

HORTICULTURE.

THE CHEROKEE OR NONDESCRIPT ROSE—IN MARYLAND.

Harewood, Montgomery county, Md. 5th mo. 2d, 1825.

Respected Friend,

In No. 36 of the 6th volume of the American Farmer, I have observed a hint from Charles E. Rowand, that individuals who have obtained from him cuttings of the nondescript or Cherokee rose, should avail themselves of that channel to diffuse the knowledge of an article that promises considerable benefit to the agricultural interest of this section of our country

In the spring of 1823, I planted 135 slips; but owing to inattention in the transportation, much of the earth was lost out of the box, and the slips so much injured, that 76 only lived through the ensuing summer, and nearly all of these were in bloom the same season;—they continued quite green through the winter, and the succeeding spring were trimmed close, and afforded from 6 to 700 good slips. There were so many applications for them, which I could not refuse, that no progress was made in the hedge. This spring there were applications for more than the nursery would supply, and by giving only a few slips to each person, I again fell short of the quantity necessary to set out, even a very short hedge. Another year I will first plant my own, and then others shall be supplied.

The nursery has lost much of its beauty by the severe frosts of last winter; but I do not observe any of the plants killed, or materially injured. So far as my observation has extended, sheep and rabbits are the only animals that will nip the tender branches and leaves—in no instance have their depredations been observed near the stalk, or where the branches grow close together;—every thing else approaches it with great caution. When in bloom, the Nondescript is certainly the most beautiful of the rose kind, I ever saw, and when accustomed to the change of climate, will probably be quite as handsome as an evergreen.

For the benefit of those who may wish them for ornament, I will forward, the next season, a small box containing one or two hundred cuttings, to the office of the American Farmer for distribution—[Should it escape my memory, any one who will remind me of the promise, may share in the distribution]—and as soon as the increase will enable me to do so, it will afford me pleasure to supply any person who may wish cuttings, and on the same terms I received them, from the individual who was the first to introduce this kind of hedge, and who has so extensively and generously distributed them;—viz. the expense of transportation.

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* Subscribers may be assured that the Editor knows nothing which is not to be found in the American Farmer. As fast as he receives information, it is deposited there; keeping nothing longer than is necessary to meet *its turn.*

I am respectfully,
J. S. Skinner. EDW'D STABLER, Jr.

P. S. On the same day the Cherokee rose slips were planted, I set out a sufficient number of small cedars, to make a hedge fifty or sixty yards in length. They were on an average six inches high, when planted, and in two years have formed an impervious, and very handsome enclosure, to the height of about two feet. It was several times clipped, to make it spread at the bottom, or the height would have been doubled. I have no hesitation in saying, that this article will soon make an elegant, strong and durable hedge, sufficient to turn ordinary stock. The Cherokee was planted in such a way as to produce the greatest quantity of slips; and I cannot speak from my own experience, as to its value for hedging. When I have an opportunity of testing it fairly, the result shall be communicated, and a comparison made with it and other articles used for the same purpose. E. S., Jr.

BUGS FOUND ON PEACH TREES.

4th mo. 30th, 1825.

Esteemed Friend,

By the bearer of this, I send thee two small bugs. In the early part of this month, while examining my peach trees, in order to remove the worms which are so destructive to them, I found in many instances bugs of this description adhering very closely to the body of the tree, just below the surface of the ground. For what purpose they had fixed themselves there, is more than I know; but a query has arisen in my mind, whether or not this insect does not deposite an egg which produces the worm. If the foregoing appears worthy of notice in any way, thee is at liberty to make what use of it thee pleases, for I, as well as many others, would be glad to find a remedy for so great an evil.

Very respectfully, thy friend,
THO'S P. STABLER.

[These bugs shall be submitted to some experienced bug-ologist.]

RURAL ECONOMY.

AN ACCOUNT OF THE OVERFLOWING WELL

In the Garden of the Horticultural Society at Chiswick—(communicated by Joseph Sabine, Esq., S. H. S. &c.)

[The specimens adverted to in the following paper are deposited in the mineral room, at the Royal Institution.]

In consequence of the success which had attended the operations of several persons in the vicinity of Chiswick in boring for water, it was determined by the Council of the Horticultural Society, that an attempt to procure an *overflowing well* should be made in the society's garden, for the purpose of obtaining a supply of water for various purposes—but more particularly to form an ornamental canal in the Arboretum, for the growth of hardy aquatic plants.

After the necessary inquiries had been made, it was determined that Mr. John Worsencroft, a person who had previously succeeded in making an overflowing well for Messrs. Bird, of Hammersmith, should be employed to execute the experiment. He commenced his operations upon the first of September last, and after boring for five weeks without material interruption, tapped the spring on the 18th of October, and finally completed his task on the following day. The depth from which the water first rose was 317 feet, and the whole depth of the well, when completed, was 329 feet; the additional 12 feet of boring having been made in order to gain a perfect opening into the bed of the spring, which flowed, when first tapped, less copiously than after the final depth was obtained. The chalk from which the water immediately comes is soft, but the bottom of the well is in hard chalk. The water in all the neighbouring wells appears to have been obtained at about the same depth; and the strata through which the perforations were made, are nearly similar to those met with in the present instance.

The tackle and instruments used were very simple. A scaffolding was raised 20 feet above the proposed orifice of the well, on which a platform was fixed to support a windlass, by which the rods used in boring were lowered into, and raised from the well. These rods were of tough iron, about an inch and a half square, and ten feet long; the ends of each screwing on to, or unscrewing from the top of the next, as they were lowered in to or raised from the hole. The instruments fixed, as occasion required, to the lowest extremity of the series of rods when in action, were augers, of various dimensions, for boring—steel chissels, for punching—and a hollow iron cylinder, (called a shell,) fitted with a valve at its lower end, for bringing up soft mud. The rods, when an auger was attached to them, were turned round by means of moveable arms or dogs, which were made to lay hold of the part of the uppermost rod at the top of the hole; the auger being thus forced through the stratum of clay or sand, was drawn up as soon as its cavity was filled with the substance it had loosened. The chissels were employed for punching through stones, hard substances, or hard chalk; the rods, when these were attached, were moved by means of a powerful beam acting as a lever, and worked by four men.

The water is discharged at the surface of the ground after the rate of six gallons per minute, and is capable of being carried 20 feet above the ground level, and even then supplies a copious stream. The well is lined for the first 186 feet with cast iron pipes, with a three-inch bore, jointed by means of wrought iron collars, which are rivetted into the pipes; the succeeding 77 feet 6 inches are lined with copper pipes, with 2½ inches bore, soldered into a single length and resting in the chalk, through which the remainder of the hole is bored, and in which no pipes were used. The whole series of pipes were introduced at once, the hole having been prepared for receiving them as soon as it was ascertained that the augers had reached the chalk stratum. The *land springs* in the gravel, above the blue clay, were kept out, in the first instance, by extra iron pipes. The spring which was found in the sand below the blue clay, and above the chalk, rose to within a few feet of the surface, but did not overflow. The whole of the water of this spring is, however, excluded from the well by the pipes with which it is lined.

The cost of the well, including that of the pipes, boring, and every other expense whatever, did not exceed 130*l.*; and the manner in which it was executed, was, in every respect satisfactory. Indeed it is impossible to speak too highly of the care, attention, and dexterity of Mr. Worsencroft, and the workmen whom he employed.

Turnham Green, Nov. 27 1823.

Memoranda of the various strata bored through.

19 feet.—Gravel.

162 feet.—Blue Clay—

Specimen No. 1—At the depth of 59 feet from the surface, a small stone, *specimen* No. 2, four inches thick, was found; another at 149 feet, was found six inches thick, but it was pounded to dust by the chissel. A third was found at the depth of 153 feet; it is marked *specimen* No. 3. At 162 feet from the surface, the clay became veiny, and intermingled with very minute glittering fragments; this is *specimen* No. 4. At 173 feet the clay became more sandy, (*specimen* No. 5,) and continued so until it altered into the next kind.

30 feet.—Coloured Clay, varying from brick-red, mixed with blue and yellow, to many shades of dull purple—

Specimen No. 6, came from 190 feet; *specimen* No. 7, from 200 feet; *specimen* No. 8, from 203 feet; *specimen* No. 9, from 211 ft., when the seam changes into the next, which is more yellow.

22 feet.—Clay, with nearly an uniform colour of yellow ochre, occasionally mixed irregularly with grey—

Specimen No. 10—This was more sandy than the previous stratum. Among this water rose in some quantity.

28 feet 6 in.—Soft soil, apparently composed of clay and sand—

It varied very much in colour, being sometimes bright green, otherwise yellow, intermixed with green, or sometimes beautifully veined with dark red and yellow. Many specimens are sent, viz:

Specimen.	*Specimen.*	*Specimen.*
11, . . 240 ft.	12, . . 242 ft.	13, . . 243 ft.
14, . . 244	15, . . 245	16, . . 246
17, . . 247	18, . . 255	19, . . 261

The last specimen is of the soil immediately above the chalk. Two stones were met with in this stratum; one like those formerly mentioned, of which no specimen could be preserved; the other a flint, *specimen* 20, at 257 feet.

67 ft. 6 in.—Chalk, among which many flints were scattered—

Of these, *specimen* 21 was one foot in thickness, and so unusually hard as to occupy the workmen three days in punching before they could force a way through it. The water was found at the depth of 317 feet, in a bed of soft chalk mixed with small flints; the hole was bored 12 feet among the water, so that the total depth of the well is 329 feet—and it is supposed by the workmen that the last piece of chalk that was brought up sticking to their punch, was from the upper surface of a new layer of chalk in which there is no water. *Specimen* 22, is a morsel of a hard stone, apparently containing ore, which was brought up in the auger from among the chalk at the depth of 274 feet. *Specimen* 23, is of the first chalk, which was found at 261 feet 6 inches. *Specimen* 24, is from 317 feet, when the first water was found; it was saturated with moisture when first brought up. *Specimen* 25, is the last piece of chalk, brought from 329 feet, and supposed by the workmen to be from the upper surface of a new and dry layer of chalk. *Specimen* 26, various fragments of large flints broken by the punch at different depths in the ground. *Specimen* 27, morsels of flint and pebbles washed out of the chalk raised from the water-source, and supposed not to have been broken in punching, but to have laid among the water in their present condition. In cutting a solid piece of chalk which had been brought up in the auger, a morsel of flint exactly like these specimens was observed, with every appearance of not having been forced into its place in the chalk by violence.

The principal impurity discovered in this water by the action of re-agents, is common salt, of which it contains about four grains and a half in the pint. When evaporated to dryness, the residue contains a sufficient quantity of carbonate of soda to render it very manifestly alkaline. This is also the case with the waters of the other deep wells in and about London. J. L.

BORING FOR WATER.

Alexandria, April 29, 1825.

Dear Sir,

I received your communication, and the enclosed letter of Mr. Henderson, of Elkton. I commenced boring here four weeks back, and have progressed 114 feet down, passing various strata of clay, sand, and gravel, until we got 50 feet down, when we met a strata of black marsh mud, in which we found detached pieces of wood and bark, some of which was in a sound state; we passed 20 feet without much alteration—then met with a very tenacious clay, (which we are now in, 24 feet—enclosed is a sample,) resembling soap stone, but variegated with various colours. The boring is about 200 yards from the river, on a rise of 30 feet above the level of tide water. The water in the well is within 20 feet of the surface. When any thing occurs worthy of note, you may expect to hear from me again.

Respectfully, yours,

LEWIS DISBROW.

MISCELLANEOUS.

NOTES OF A DESULTORY READER.

Communicated for the American Farmer.

RUINS OF POMPEIA.

I took the road to Portici, and I did not stop until I arrived at Pompeia, where I spent the remainder of the day. I will not repeat to you what has been so well said, on the unexpected impressions produced on seeing these beautiful remains of antiquity. The ashes have kept them in perfect preservation, and they appeared to want only inhabitants. I shall merely add, that, within the last four years, the digging has been much extended. They have discovered an entire new quarter, the buildings in which being much ornamented, indicate the residence of richer proprietors than those of the houses previously discovered. They have found a second gate of the city. With a few years more labour, Pompeia will rise completely from the tomb in which it has been buried so many ages.

There are no ruins in Italy, nor probably, in the world, which excite so much interest as those of Pompeia, for there is nothing conjectural in what we see there: the imagination has nothing to fill up, nothing to suppose. Every thing remains there as the Romans left it; every thing indicates their habits. We live with them; we use their furniture; we eat at their tables; we view their drawings; we read their manuscripts. The time which has lapsed since the day when Pliny met his death there, seems to be lost, and it might have been yesterday.

I remained a long while looking at the workmen, who were digging. They had just gotten into the inside of a house, and every stroke of the spade made a discovery. I know nothing likely to excite so lively an interest as the digging in such a celebrated spot. Expectation and curiosity equally affect us. The imagination is excited by the historical recollections, at this instant, called forth. The eyes are involuntarily fixed on the trowel with which the workman cautiously removes the ashes, for fear of breaking the articles which he may chance to expose.

I was immoveably fixed near these labourers; they threw shovels full of ashes into wheelbarrows.—They discovered a wall; it was painted in fresco—beautiful arabesques gradually appeared. May not these medallions explain some of the secrets of antiquity? But our expectation, in this instance, was disappointed—they represented only bacchants and cupids.

The work went on; in emptying a room of the ashes with which it was filled, we came to the lower part of it, and the precautions were increased, as they expected to find furniture and some valuable articles. The trowel touched a hard and resisting body. The workman removed the ashes very slowly, and he perceived a bronze ornament. Beautiful carved leaves rose from the ground; they adhered to branches, having fruit upon them, which were oranges. The stem of the tree rested in a vase of the same metal; it served as a pedestal: this bronze, of an elegant form, was only a candelabra, in the fruit of which were inserted sockets, which diffused around the light of twenty lamps. Art has produced nothing more natural, or more graceful, than this candelabra, whose reappearance I witnessed after two thousand years, as clean and as polished as when it first came out of the hands of the workman.

On the side of this bronze, and on the same pedestal, was a bust of Marius; I was gratified at being present at discoveries of so much interest, but night put a stop to the work; the workmen, as well as the antiquarians, went away, and I followed them with regret. In this short time I could not help thinking, how one might pass a whole life in these places, without experiencing a moment's fatigue or ennui.

ROTATION OF CROPS,

As pursued on the plain of Sorrento, in Naples.

The plain of Sorrento is almost the only part of the kingdom of Naples, in which can be seen the effects of an active and will directed industry. It is also in this beautiful country that the villagers have successfully introduced the culture of cotton; a culture which the usages of society have rendered so necessary. It had been, before, adopted at Naples; but, until within a few years, it was sown only on small spots, for a local and limited consumption. The continental system, having raised the value of this plant, a larger space was allotted to its cultivation; and the farmers, in this country, profiting by the natural advantages of their climate, furnished, in the year 1812, nearly sixty thousand bales of cotton to the manufacturers of Europe.

The land which I have just seen, promises, this year, an abundant crop, which will enrich some families, who little expected, in this world, any more than a moderate existence. This consideration added much to the interest I felt in visiting this country.

I learned the method of cultivating the cotton, on a large scale, adopted by the metayers of Piave de Sorrento, and the way in which it has been introduced into their regular course of husbandry.

The land is turned over, by the spade, in the month of March, and the seeds are sown in lines, at three feet distant; the plants, in the lines, are two feet asunder. The earth is so rich as to require no manure, but only to be constantly kept clean; women are, therefore, employed, during the whole season, in weeding the fields of cotton. As soon as the flowering is over, and the well-formed capsules require only the sun to ripen them, the ends of the branches are nipped off, thus determining all the sap to the fruit.

The harvest lasts a long while, and consists in collecting the capsules as they ripen. It is then only requisite to clear the cotton, by separating it from the seeds. This operation is long and tedious. They were endeavouring to make machines to simplify the process; but I have not learned whether they have succeeded.

The course of husbandry adopted in the land which has been covered with volcanic ashes, and of which I gave you an account in a preceding letter, left no room for the cultivation of cotton. It could not be admitted without changing the established course; the succession of crops which I am going to describe, is the result. It merits attention, because it is, probably, the best arranged and the most productive of any in the world.

None of the crops, which, in the old system of the country, were immediately necessary for the farmer's subsistence, could be dispensed with. They, therefore, continued to begin with the culture of maize, for which the land is manured. Wheat follows it; beans are then sown immediately after harvest. This crop being intended to feed cattle during the winter, is taken up sufficiently early to admit of the land being prepared to receive the cotton seeds by the end of March; after this is harvested, wheat is again sown the same autumn, to which succeeds the purple clover. Melons are grown after the clover, and legumes planted as soon as the melon crop is taken off, occupy the ground until the spring, and finish the course. It is as follows:

First year	Maize—manured.
Second	Wheat, followed by beans.
Third	Cotton.
Fourth	Wheat, followed by wild clover.
Fifth	Melons, followed by legumes.

Five years—eight crops.

This course, thus, furnishes eight crops in five years, two of which are corn, three are leguminous, one is commercial, and two are for the support of animals. It is impossible to arrange these different crops in a better way. The nature of their growth, and the different culture they require, alternately rest and prepare the soil, whose fertility is kept up by this variety, producing the utmost which can be rendered by nature to human industry.

THE THREE TEMPLES OF PAESTUM.

After travelling a long way in the maremmes, we discovered, on the confines of the horizon, some solitary buildings, but entire, and which time has respected. As we approached them, they seemed larger, and, at length, appeared immense. We, at last, discovered a colonade, very massive, and of a regular structure. These monuments projected from the azure sky, and their architecture, could be distinguished at a considerable distance. They are the three temples at Paestum; And it is here travellers finish their journey.

Of all the ruins in Italy, these are the most ancient, and the most striking. The times are unknown in which they were built, but they are called heroic, because it is easy to place heroes beyond the history of the human race. These temples have witnessed the long history of Rome; they have seen its termination, and seem destined to witness the last days of the world.

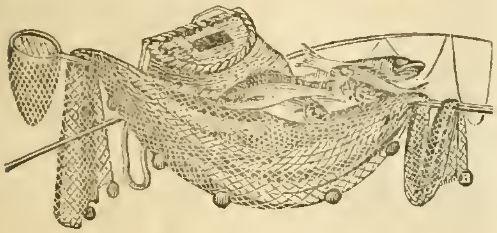
At what period of history, at what age of the world, must we fix the epoch of the existence of those unknown, but astonishing nations who built, in Italy, Cyclopean walls, while in Africa they raised the pyramids of Gize and the avenue of the Sphinx? History is silent, and gives us no information respecting the miracles of that age, whose monuments confound our reason and almost our imagination, for they appear above human power. Nothing in nature has, to this day, explained the singular mysteries of this monumental civilization; a civilization so great as still to astonish the world by its ruins, so religious as to have raised colossi for the altars of its gods, and mountains for the tombs of its dead.

How is it that all the traces have been lost of that race of giants who had mammoths for their domestic animals, and who constructed their ramparts with rocks? The ruins which they have left us astonish us the more, because we cannot conceive that genius of the ages which presided at their birth. It is a world, the secret of which has never reached us, and with respect to which we can do nothing, but remain mute before those august monuments, which time has preserved by placing them in wildernesses.

Nature, in our days, does not seem to have strength sufficient to destroy these ruins; they are so massive, and the earth has been so long accustomed to support them, that they seem even like a work of the Creation

These enormous colonades, imperishable in the midst of solitudes and ages, appear destined only to see the seasons roll on, and to serve as a retreat for the animals on the plain for they come to these temples to seek shelter during storms. An aged buffalo is often seen waiting the return of day behind a pillar, which, for twenty years, he has chosen as his resting place. The rest of the herd respect him as the master of the desert, and never dispute with him the place he has selected.

On resting near these ruins, we experience an emotion which I know not how to describe. We think we are viewing a scene where every thing passed in a world, and in an age, which are strangers to our time. Nothing, in the solitary scenes which surround these temples, destroys the illusion; and when we withdraw from this theatre of an unknown world, the illusion, for a long while, follows us, rendering, by comparison, every aspect of the world cold and diminutive.



Potomac Fisheries.—This great source of profit to the proprietors and of benefit to the neighbouring community, has not, as yet, been, we learn so abundant this season as in usual years; owing to the remarkably forward spring, and the fact that the great schools of fish which annually run up to the fresh water of this river, when it reaches the temperature proper for receiving the spawn, having been, in the unerring operations of nature, somewhat ahead of the calculations of the wary fishermen. The first of April is the time when these count on meeting the first schools, and they continue to run for about a month or six weeks; but it seems that this year they found, on putting out their seines at the usual time, the fish were in as great abundance as they generally are in the middle of the month—so that it is feared that nearly half the season for taking the fish had passed away before the nets were spread. But there is one evidence which deserves to be recorded, that they are still in plenty: within the last few days the greatest haul of rock fish ever remembered by the oldest fishermen on the Potomac, was made.

We have it from such a source as to have no doubt of the fact, that on Friday last there were taken at the Sycamore Landing, on the estate of Gen. Mason, of Georgetown, about twenty-five miles below this city, at one haul of the seine, four hundred and fifty-four rock fish, averaging at least sixty pounds each, and that many of them weighed as much as eighty pounds. They were all brought fresh to the markets of Washington, Alexandria, and Georgetown, and although sold at very reduced prices, it is said the produce of this single haul was about two hundred and fifty dollars.

Alexandria, April 2.

We daily hear complaints of the ill success of our Potomac fishermen, while those of Susquehanna are represented as more than usually fortunate. The number and quality of the shad and herring taken there far exceeded expectation. At one fishery it is stated that 300,000 herrings were taken at a single haul of the seine.

Uncommon Fish.

Being on board the brig Mary & Eliza, of Boston, from Baltimore, on Wednesday, 27th April, 1825, at 6 A. M., Race Point, Cape Cod, bearing S. S. E., distant 4 leagues, discovered something a little on our larboard bow, hauled up for it. When at a small distance, found it to be a living animal—took it to be what has been called a sea serpent. We passed it a small distance, tacked ship and stood for it again Found that there were two of them—they made from us—however, we soon overtook them. Being some time in company with them, we had a fair view. They appeared, when head to us, more like horses swimming than any thing we could compare them to. Their length appeared to be about 40 feet, their head and neck about 6 or 8 feet, which they kept out of water about 4 feet. From the top of their heads to the water, the head part appeared to be full of bunches like barnacles, or knots of divers colours; being about 100 feet from them, we could view them well. Their bodies appeared to be the colour of a whale, their tails lay flat ways in the water, and spread about 8 feet, like a whale's tail. After viewing them about 15 minutes, we tacked ship, and stood on our course. They likewise tacked and swam after us, when they appeared more like horses than ever, and their way through the water was nearly as fast as ours. There was a white streak running about two-thirds round their heads at the water's edge, which we took to be where the mouth was. They sometimes blow like whales.—The spout holes were about 4 feet from their nose, on their backs. They had a very blunt nose. They must either be sea horses or sea serpents, for such fish none on board ever saw before.

Abner H. Lovell, *master.*
Benj. Small, *mate.*

POETRY.

For the American Farmer.

ON THE APPROACH OF SPRING.

Cold winter's frosty head lies low,
Hard on a bed of driven snow;
Oh, that his dreary reign were o'er,
And spring were entering at the door.
The wish had scarcely pass'd my lips,
When from the south the maiden trips;
Hither with eager steps she hies,
When stiff and cold the tyrant lies.
She listens to his hideous snore,
Whilst north-west winds in concert roar;
Nearer she comes with noiseless pace,
And breathes upon his icy face.
Her balmy breath his eyelids warm,
He raises up his rugged form,
And struggling to regain his power,
He spouts aloft a snowy shower.
The snowy shower dissolves in rain,
And down the tyrant sinks again.
Once more she breathes—the sunbeams play,
'Till quite subdued, he melts away;
From hill to vale he's gliding fast,
And in a stream is drown'd at last.
With April face of smiles and tears,
No more his iron grasp she fears;
Gaily she carols forth her song,
Whilst early birds around her throng.
With *hyacinths* her head is crown'd,
Shedding delicious fragrance round;
And *violets*, with their rich perfume,
Around her neck in clusters bloom—
Her cheeks display the blushing *rose*,
Carnation on her lips repose,
Sweet *pinks* upon her bosom rest
And *heart's-ease* lie within her breast;
Of brightest green her robe is tinged,
With *jonquils* and with *tulips* fringed—
The *lady-slipper*, gay and neat,
Seem made for Cinderella's feet;
Striped *ribband grass* these sandals lace,
And modest *thrift* her ancles brace;
And *daisies* quilled in triple row,
Hang "on her light fantastic toe"—
Bright *silver bells* her footsteps print.
"Her very step has music in't."
A *golden rod* is in her hand,
More gifted than Prospero's wand;
At every step she onward takes
Some living thing is roused and wakes—
The *lilac* blooms within its reach,
Forth bursts the blossom of the *peach;*
The naked *crocus* lifts its head,
Cold shivering from its leafless bed—
With haste the yellow *daffodil*
Throws o'er her neck a golden frill;
And pale *narcissus*, Ovid's theme,
Leaves the lov'd shadow in the stream;
And lowly *periwinkles* run,
Blooming without a summer's sun—
And glittering *butter-cup*, that throws
Its yellow dust upon your nose;
And on *side-saddles* gaily ride
Fair-maids-of France and *London-pride;*
Blue-bells from Scotland hither come,
And with the *shamrock* find a home;
And *snow-drop* pluck'd from Russian bear,
And *Bethlehem star*, to christians dear—
All rise to deck the virgin's bower,
Fresh glittering with an April shower.

THE FARMER.

Baltimore, Friday, May 6, 1825.

Wild Turkies—*for General la Fayette.*

The Editor of the American Farmer is desirous of procuring some *wild turkies*, to be sent to France and England. The first are for the "nation's guest," its early, steadfast friend indeed, as he was our friend in need.

He has repeated to Mr. Skinner the wish to obtain two cocks and three or four hens, for his own use, at La Grange, and wishes them as black as they can be had. Besides the pleasure which he is sure it will afford any one who has it in his power to gratify the wish of the General, any reasonable expense will be paid by Mr. S. for the fowls, and for transportation, &c. to Baltimore—and they shall be presented to him in the name of the person or persons from whom they are received. If it be not practicable to get grown turkies, it may be that eggs may be found, and placed, for being hatched, under tame turkies. Both, indeed, would be desirable, lest old ones might not so well bear transportation by sea, or might not be so far domesticated as to breed.

Any communication on the subject will be thankfully received, and transmitted to Gen. la Fayette, by

J. S. SKINNER,
Post-master—Baltimore.

P. S. For a distinguished cultivator of natural history in France, Mr. George Washington la Fayette requested the Editor of the American Farmer to procure, if practicable, either an impregnated female *opossum*—or if that were not practicable, a male and female opossum. They are required, to enable naturalists to settle a very curious question in the natural history and habits of that animal—which will be better understood, if any gentleman will have the goodness to loan to the Editor, for publication in the American Farmer, Doctor Barton's Essay in reference to this subject, or to inform him where it can be had.

☞Editors of newspapers would confer a favour by giving the above paragraphs a single insertion.

Strawberries.—Much perplexity, and loss of time and labour, results from persons not knowing how to distinguish between the *male and female plants*—a certain proportion of the former being necessary to the fructification of the latter. Whole beds, of large dimensions, prepared with great care in other respects, prove unfruitful from this cause. This is, perhaps, yet more apt to be the case with the hautboy, and may be thus accounted for: on turning to page 197, vol. 6, the reader will find the best instructions, from the best horticulturist in the state; he there says, that *except the hautboy*, he has not known any strawberry to have their male and female plants separate and distinct; that all others that he has seen, are hermaphrodites. In this way it may happen that a bed of hautboys may be without a single male, or with a number altogether insufficient. What we want, therefore, is, if they can be given, some plain directions for distinguishing the sexes. If, besides such directions, some gentleman would have the goodness to send to our office the *plants*, it is possible that by drawing and engraving, the difference may be intelligibly represented. Our engraver, Mr. Butler, is a young gentleman of genius and taste, who can do, whatever can be done in that way.

The Maryland Society for Internal Improvement will be glad to receive any documents, tracts, maps, essays, &c. which any friend of internal improvement may have the goodness to deposit amongst their archives, for the use of the society.

For sale—by the Editor of the American Farmer, "Memoirs of the Pennsylvania Agricultural Society," with elegant engravings, published by J. S. Skinner, for $1.50, or four copies for $5.—These memoirs contain communications from the best practical farmers in the state of Pennsylvania, and elegant engravings of Col. Powel's Improved Short Horn Bull, Wye Comet—of three Tunisian mountain broad-tail Sheep—of a Spanish shepherd s Dog—of Eastman's Improved Straw-Cutter—of Mr. Kurtz's Substratum and Shovel Ploughs—of Pope's Patent Threshing Machine—and of Dishley and Southdown Sheep.

It is amongst the most valuable and the cheapest agricultural work ever published.

The Editor returns thanks for his friend in Ohio, to the gentlemen who have so kindly answered his request for holly berries—whereof a sufficient number has been received.

Will the Editors of papers on the Eastern Shore of Maryland, and at Annapolis, have the goodness to notice the liberality of Capt. Vickers, of the Steam Boat Maryland, in having offered, on the part of the company, to transport gratis, animals of improved qualities, intended to be exhibited at the Cattle Shows at Baltimore and Easton—when they are accompanied by their owners.

All persons who intend sending any thing for exhibition at the next Cattle Show, on the first of June, will please give notice thereof to J. S. Skinner, without delay.

COMMERCIAL RECORD.

We have been favoured by a commercial friend with the following extract of a letter, dated the evening of the 30th of March:—

"Since mine by the Balæna, we have had no arrivals. The demand for Cotton is most animated The total sales of the three first days of the week were 29,500 bags. This day about 10,000 bags more were sold, and prices are fully 1½ higher than last week—16¾ have been paid for Boweds, and for a lot of old, of as good quality as I have ever seen, 17d have been refused. Upon a change of wind, we must have large arrivals, but I do not think they will affect prices materially, if at all."—*N. Y. paper.*

Tobacco.—*Actual sales.*—A hogshead sent into market by Daniel Murray, Esq., weighed 830 lbs., and sold at $30 per hundred.—Mr. Chas. Hill, of Prince George's county, sold 52 hhds., common red, for $6.50 per hundred, round.—Col. James Thomas, of St. Mary's county, sold part of his crop at $12 per hund. for first, and $6 per hund. for seconds.—One hogshead of Ohio tobacco, made by Isaac Ijams, weighing 833 lbs. nett, sold for $40 per hund. Several other sales, not reported in time for this number, shall be given in our next.

Inspections during the week in Baltimore.—At Warehouse No. 1, 400; at Warehouse No. 2, 414—total 814.

Live Cattle may be quoted at 5 to $5½ per hundred.

SEEDS, PLANTS, GRAIN, &c.

Deposited since last notice with the Editor of the American Farmer, for the use of his subscribers.

A bunch of genuine Guinea Grass—left by an unknown hand.

The seed of a new and extraordinary species of pine, with the following notice of it by Doctor Spence:

Synapuxent, *25th April*, 1825.

I also herein forward seeds from a pine tree, which is an entire stranger with us, and was raised from the seeds of a cone, left by the tide on the sea shore.—The tree is yet young, but its enormous seed cones, spires, and the seed themselves, seem to indicate that it will attain gigantic size. Should you not already be familiar with this species of pine, allow me to say you will find it beautiful as an ornamental tree; and it will no doubt prove a valuable addition to our timbered lands generally.

Have you ever seen seeds more elegantly winged?

I am yours, truly,

John S. Skinner, Esq. JOHN S. SPENCE.

[The leaves, or spires, sent, measure more than nine inches, and the seed very much resemble the wings of locusts.]

The straw of one grain of rye, with the following letter:

Potter's Landing, Caroline county, Md.,
Dear Sir, *April* 23, 1825.

I saw in your paper a short time ago, an account of the increase of one grain of rye, from a Hartford farmer. I send you an account of the increase of one grain on my farm, which is as follows: 128 heads from one grain which produced 7552 perfect grains. This rye came up in a lot of turnips, which was sown in the month of July, and was ripe by the middle of June; the ground was manured with shell and clay mould.

I send you the bunch of straw, the growth of this single grain. Yours, very respectfully,

John S. Skinner, Esq. WM. POTTER.

[A case of extraordinary increase by transplantation is given in the Philosophical Transactions, vol. lviii. p. 203.]

"Mr. Charles Miller, of Cambridge, sowed some wheat on the 2d of June, 1766, and on the 8th of August one plant was taken up, separated into eighteen parts, and replanted; these plants were again taken up, and divided between the middle of September and the middle of October, and again planted separately to stand the winter; and this second division produced sixty-seven plants; they were again taken up and divided between the middle of March and the middle of April, and produced five hundred plants. The number of ears thus produced from one grain of wheat was 21,109, which measured three pecks and three quarters of corn, weighe forty-seven pounds seven ounces, and were estimated at 576,840 grains."

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Lorain's Husbandry, on ploughing—Banking with the Spade—On the Improvement of Sheep and other domestic animals—Remedy for Hoven Sheep and Cattle—On the management of Milk Cows and rearing Calves—Prospect of Crops—Agricultural Inquiries, cob mill—General Coffin—Bugs found on Peach trees—Overflowing Well, London—Boring for water—Notes of a Desultory Reader—Potomac and Susquehanna fisheries—*Poetry*, On the Approach of Spring—Editorial—Commercial—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	WHOLESALE. to	RETAIL. from	RETAIL. to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	6 50	8		
COFFEE, W.I. Green, .	—	17	21	20	25
do. Common,	—	16	17	18	20
COTTON, Louisiana, &c.	—	22	26		
Georgia Upland, . . .	—	22	24		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent each number to No. 18	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	11	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32	33		
FISH, Herrings, Sus. new	bbl.	2 25		2 50	
Shad, trimmed, new,	—	6	6 50	7 50	
FLAXSEED, Rough, . .	bush	80	85		
FLOUR, Superfine, city,	bbl.	5 50	5 75		
Fine, ...	—	5			
Susquehanna, superfi.	—			none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	39	41		
Wheat, White, ...	—	1 10	1 15		
do. Red, ...	—	1 06	1 12		
Buckwheat, ...	—	55	75		
Rye, ...	—	37	40		
Barley, ...	—	50			
Clover Seed, ...	—	3 25		3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—			none	
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	9			
LEATHER, Soal, best,	—	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6¼	7	7	8
NAVAL STORES, Tar,	bbl.	1 50		1 75	
Pitch, ...	—	1 50	1 75	2	
Turpentine, Soft, . .	—	2	2 50		
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	35	50		
RICE, fresh, ...	c.lb.	4 00	4 25	5	
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	25	27	37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—		27		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	10 25			
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Ground Alum, ...	—	55			
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

THE HORSE AND THE OX.

IN ANSWER TO "SANDY" AND "COLUMELLA."

Buck's County, Pa., May 2, 1825.

TO THE EDITOR:

"Sandy" and "Columella," in their respective essays, have offered some arguments in opposition to the subject of a communication addressed to you upon the superiority of horses over oxen, for the general purposes of farm labour; which, not having hitherto had the leisure to notice, I now proceed to examine into the value of the several considerations urged by them.

It may, however, be observed, that by a reference to my communication, it will be perceived that the object was, not to contend for the entire neglect of oxen as labourers upon the farm, but to advert to what has appeared the error of those who assert their equality or superiority to the horse, and the consequent entire exclusion of the latter.

"Sandy" commences his correction of my errors, by committing one himself, when he makes me assert, that the superior intelligence of the horse depends upon an increased allowance of food; whereas, on the contrary, I believe such superiority to be innate, and independent of extrinsic circumstances—as will appear evident, from a comparison of the two animals, in their wild, as well as their domesticated state. As a proof of inferiority, upon the part of the horse, it is contended that he will not go by word; when if "Sandy" had ever travelled northward, he would have discovered that our teams are constantly so driven, and a Pennsylvania carter would be much amused to be told that his horse would not go to the right, or to the left, precisely as bidden, without the aid of a check-line, or even of a pole to strike him over the head, in order to quicken his apprehension—as usual with that favorite of "Sandy's," the ox. If he require a bridle, what does it prove, but that he has too much spirit and animation to be trusted without one. But if any one venture to speak of the natural sluggishness of the ox, evident from the time of his birth to his death, we are immediately referred to the feats of some animal groomed like a race horse, who has ploughed an eighth or a sixteenth of an acre in a certain number of minutes, or to the equally decisive fact of their keeping company for a few miles with regular team horses, who are customarily slow; whilst, perhaps in the next paragraph, it is admitted that they are not particularly well calculated for regular road service.

It would be much more satisfactory, and to the purpose, for some gentleman who farms 2 or 300 acres with oxen *only*, to inform us of the quantity of work done by them in the year—of the manner in which that work is executed, and of the food consumed by the said working oxen.

We are told of the great gentleness of the ox; but when directions are given for breaking him, it appears to be at least as difficult a matter as is the same process with the horse. The fastest walking ox that I recollect to have seen, almost always upon being put to work after some days rest, ran away.

It may also be recollected, that if the horse be worked hard, and be scantily fed, he is altogether as quiet and as resigned, although not so slow as the ox, under similar circumstances. But if he is made fat, he is immediately changed into an animal full of vigour and energy, whilst the ox, by the same process, is made still more lazy, and his inclination to sleep still more increased.

We are also told of the cheapness of his harness, when by others of his warm advocates, it is considered one of the greatest of modern improvements, not only to harness him like the horse, but to curry and brush him, and to bestow, in every respect, upon him, the same attention. And certainly they have more of reason and humanity upon their side, than those who think that the ox is to do all manner of work, and to get little to eat, and (so to speak,) less to wear.

We come now to what, with many, has very great weight, and which, if the fact were really as represented, would be much to the point, viz: that the ox, after rivalling the horse in his day's labour, requires nothing but hay or grass for his nourishment. But is the fact really so? It is admitted, that working cattle very generally get nothing more than has been represented; and it is equally well known, that in very many instances, it is the practice to give no grain to horses, except when performing the severest labour. But is the practice, in either case, a good one? Is it, in truth, an economical one? Does not true economy, in the management of domestic animals, as suggested by an enlightened cultivator of Virginia,* and as must be apparent to the careful observer, consist in liberality towards them? And is there as much profit in the labour of a half-fed animal, be he horse or ox, as in that of one well nourished and vigorous? Is even the return in manure as valuable?

Upon this point, it may be to the purpose to quote the opinion of one of the most zealous advocates of ox labour. "To the idea of the ox being capable of labour without the alimentary support of corn, I never could attach any great importance theoretically, still less since I have paid to the subject a certain share of practical attention. It is probably mere habit, that we have continued the ancient economical method of feeding the ox, and that we have not tried its success with the horse. The latter measure, we know, has been strongly recommended, in times of scarcity, by our economists. Has not the shining example of a Suffolk man been held up to public imitation, who, upon a large scale, fed his labouring farm horses, through a course of years, upon nothing but raw potatoes and straw? Have they not discovered, in Nottinghamshire, that both English and Swedish turnips are equal to oats? And do we not find a number of such wonderful things in old Gervase Markham? I have been as diligent in experiments in this line, as most men; and once, with the most ardent zeal of improvement, fed all my horses into the mange."† To which I may add, that I also have heard of many wonderful accounts of oxen doing the work of horses, and living upon grass, hay or straw alone; but upon examination, have found that the comparison has been made with the most wretched of horses; or that the oxen have been worked only occasionally, and at intervals; or that if worked with tolerable regularity, and fed in the way mentioned, they have invariably been miserably thin.

It appears then that the ox, with the horse, requires to be well fed. As to the comparative quantities consumed by either, if it were a question of mere existence, it is possible that the former might be kept alive upon less than the latter; although I am not acquainted with any experiments that have been made to decide the point. This, however, is entirely immaterial—but it is, or may be, within the experience of every one, that a horse not at work will keep fat upon less than an ox of equal weight, under similar circumstances; and supposing, that when at work the former requires rather more food than the latter, (a point not apparent,) I contend that he will do a great deal more work, and that it will be much better done.

Our opponents seem to imagine, that if they can prove that 6 oxen will do the work of 4 horses—supposing them not to consume more, that they have decided the question. But it may be answered, that it is vain to multiply animals for labour, without at the same time multiplying the number of drivers, of ploughs, of wagons, of carts, &c. &c. when the expense is, of course, proportionably increased—for a great objection to the ox, is, that with a limited number of implements, a greater can do little more work than a smaller number: e. g. six oxen, with two wagons, cannot haul in hay or grain, as fast as four horses with the same number of wagons; much less can they plough as much ground, per diem, with two ploughs—whilst it would cost as much to keep them. If you have four oxen in the place of four horses, their slowness constantly leaves exposed to the risk of damage or loss, produce ready to be secured; for while the oxen are reflecting upon the propriety of moving from one cock of hay or shock of grain, to another, the horses have already accomplished the business; or while the oxen are composedly walking from the barn or stack to the field, the horses have already arrived there at a long trot. The case is the same in ploughing. A day too late, in critical seasons, is of great consequence. The losses resulting from these delays may, in theory, appear trivial, but they are, in practice, of real and great importance—adding, in the course of the year, as much to the value of the horse, as they detract from that of the ox.

Upon the subject of the necessary expense of keeping a horse, there have been very exaggerated statements; instances of which we have in the essays under consideration. "Columella's" is high, but "Sandy's" is beyond bounds—and if his horses really devour as much as he supposes, they certainly belong to a race "*nati consumere fruges,*" and I am not surprised at his alarm. By the former, the expense is stated at about $31 per horse per annum—by the latter at $52 per annum. I can account for this difference in no other way, than from a difference in the prices of grain, and, perhaps, from the circumstance, that as among our southern neighbours the ability to run a four mile heat in a given time, is considered as the acme of excellence in a horse, there has no room been left for the propagation of a more useful breed of animals. My horses are large, very powerful, labour almost constantly, are always fat and in good spirits, are considered to be fed much above the common standard, and consumed last year, as precisely as can be ascertained, 79½ bushels of grain, consisting of ground oats, corn and rye, at the average market price of 32 cts. per bushel, amounting to the sum of $25.44.

The question now appears to be brought to a narrow compass; and is, whether the superior activity and intelligence of the horse, the accuracy with which he performs his work, the greater amount performed, and his acknowledged superiority in his adaptation to *every kind* of labour, do not render him preferable to the ox for the general purposes of farm labour, notwithstanding the acknowledged, but solitary advantage, which the ox possesses in his being an eatable animal.

If the ox is to be preferred, it must be upon this ground *alone*, as he is manifestly, and by the admission of many of his advocates, inferior in nearly every other desirable property. And much importance is to be attached to the decided and *very general* preference shown to the horse in practice; for it is in vain to compare the subject of ox labour to that of some modern improvements, to which it is often thought a sufficient objection, that they *are* modern—for oxen have been used from time immemorial, and notwithstanding that ancient prejudices are as much in their favour as of any other established practice, they appear to lose rather than to gain ground, being a general attendant upon imperfect modes of agriculture.

I would not wish to be the advocate of any practice at war with a sound economy; but the present discussion involves the question of the comparative efficiency, as well as the cheapness of labouring animals.

---

* Colonel Taylor.

† Lawrence's General Treatise upon Cattle.

The conclusion, that it appears to me ought to be arrived at, is, that the ox ought to be regarded as an animal to be fattened and killed, but who may in the mean time be made to contribute to his support, by *assisting* in the labours of the farm.

I had intended to make a few observations upon "Columella's" proposition to substitute mules for horses, possessing, as they do, some of the disadvantages of each kind of stock under discussion, without their respective advantages—but I have already far exceeded the limits proposed to myself.

C.

P. S. I take this opportunity of correcting a mistake in my former communication. In adverting to the use of oxen upon the king of England's farm, through inadvertence, it was said to be his Norfolk, instead of his Windsor farm. The printer, also, by inserting *our* for *one*, in the 5th line and 3d word, (vol. 6, p. 388,) has entirely perverted my meaning; the amount of which was, that the ox advocates had hitherto walked their hobby undisturbed through the pages of the Farmer, and I thought it but reasonable that the horsemen should, in turn, canter their favourites upon the same ground. C.

COTTON.

South Carolina, April 29, 1825.

Sir,

In the National Gazette, of the 19th April, is to be found an extract of a letter received at New York, from a French manufacturer, stating the Egyptian cotton to be "very inferior (11 per cent.) *this year,*" (mark, *this year.*) "and that 5 or 6 per cent is sand." "We (says the editor,) are *confident* that no *permanent* rivalry is to be apprehended" by the American grower.

Immediately under this sage paragraph, there is another, stating that out of 20,583 bales, there were 10,200 Egyptian sold at Liverpool, on the 15th March. The price is not stated, but in the Gazette of the 14th April, there is another Liverpool account of the sale (on the 14th of March,) of 17,120 bales—9,471 of Boweds at 11¼ to 15d, and 2,308 Egyptian at 13¼ to 15d. Here we see the lowest Egyptian 2¼ higher than the lowest Boweds, and not one word about deficiency of quality, sand, &c.—a fact worth ten thousand arguments, or one million rash assertions.

There is, I fear, a miserable mania that will lead to much inconvenience in the cotton market. A great source of the deception arises from a forgetfulness of the fact that the present high prices in Great Britain springs from speculation alone—that the stock of the speculators *in fact*, not finally sold out, is always liable to be thrown again upon the market, and hence that *there is* a danger of a heavy fall—that the produce of the Carolinas and Georgia is nearly equal to past years—that the produce from the Gulf of Mexico infinitely exceeds that of past years—that there is no danger from the Mediterranean—and, finally, that the impulse given this year, will lead to an immense quantity being planted the next year. Virginia will produce a large quantity, if she has common luck; and, by having been accustomed to a neater cultivation, will in all probability be highly successful.

It is true the consumption is increasing in Great Britain; but the sources of its supply are also augmenting in proportion—and the *increasing* value of the East India cotton is remarkable. It holds a much better proportionate price than it ever did in the market, and appears to me to be constantly improving. Again, I perceive it is the intention of the Chancellor of the Exchequer to take the duty off colonial ashes. His funds are annually increasing, and it may be possible he contemplates another reduction of West India and East India duties. He can do it more easily than people imagine. Indeed, the old ridiculous notions of monopoly, &c. &c. are wearing away so fast, and affairs, in consequence, are bearing a so much better aspect, that there is scarcely any thing he can ask for that he cannot obtain. For instance, look at the "unmeaning oaths and obsolete statutes"* swept away by the surrender of the charter of the Levant company. I still think it possible the East India company may partially submit to a similar arrangement, if they can derive any advantage from it to their cottons and sugars.† But, we shall soon hear of a property tax, and an almost total repeal of the assessed and colonial taxes—and if the East India company see this, and the West India proprietors also, it will give a very different complexion to all their affairs.

Mr. Lowe (p. 395, London edition,) says, that in the event of new taxes being called for, a property tax of 2½, or even 5 per cent, would be preferred to a revival of such duties as those on malt, salt, leather, coals, or the house and window tax.

Mr. L. (p. 389,) states, as imposts bearing on productive industry, various taxes amounting to 30 millions pounds. Leather, cotton, paper, glass, candles and tallow, bricks and tiles, auction duties, hemp and starch—these produce about 2,700,000*l.*; sugar produces about 3,000,000*l.*; and the assessed taxes about 4,500,000*l.*—in all, 10,200,000*l.* Now, as in 1815 the property tax, at 10 per cent, produced nearly 15 millions of dollars, it is probable a 5 per cent tax now, would produce a sum very little short of sufficient to discharge all these taxes. What, then, would be the result? The discharge of the sugar from duties—of the cotton also; and, indeed, all the above enumerated articles.

The public cry as to the duty on salt has procured its repeal. And how was this effected? By Sir Thomas Bernard, and his friends, constantly appealing to the public on its impolicy and real unproductiveness. Now, Sir H. Davy (Agricultural Chemistry, Phila. 1821, p. 60,) says, "the nutritive properties of sugar are well known. Since the British market has been overstocked with this article from the West India islands, proposals have been made for applying it as the food of cattle; experiments have been made, which prove *they may be fattened by it*, but difficulties, connected with the duties laid on sugar, have hitherto prevented the plan being tried to any extent."

If Sir H. Davy's doctrines should gain ground, perhaps these *difficulties* may be removed. But *cui bono?* perhaps you will say—what have we to do with British duties, &c.? In this case I would reply, that such is the rapid progress of improvement in that country, it is highly necessary this should watch it, and carefully regard its every step. And, of all the measures of Mr. Adams administration, I think his taking Mr. Rush into office is most to be applauded. Though some persons are pleased to think that gentleman's talents not of a towering description, I really believe that (alive, as every intelligent and active mind must be to the events passing around it,) he will bring with him a mass of practical knowledge, that, perhaps, men of higher (not more useful,) ambition would not have possessed.

I have carried this communication to a length, and made it more various than I intended; but the interest of the subject increased as I advanced, and you, as well as your readers, will, I hope, excuse its prolixity.

I am, sir, yours, &c.

Amphicon.

P. S. Many persons are deceived by calculations. In a letter from Messrs. Thornley, of Liverpool, of the 8th March, they say, "the extended operations in cotton are founded on the presumption that the supply for the year will not equal the consumption. On this important question, *as it so mainly depends on the American crop,* a more correct opinion may be formed in America than in this country. Our import for the first two months of this year, including 9,337 bags from Egypt, is 66,838, being an increase of 2,634 bags on the imports of the two first months of 1824." But these Liverpool letter writers are droll fellows. One in the National Gazette, of the 16th of March says, "from the prevalence of easterly winds the import is nearly suspended."—Another, in the Charleston Mercury, of the 15th of March, says, "the import of the week is 14,000, of which 10,000 are Egyptian." To be sure this is not *quite* a suspended commerce. But their contradictions are curious. Many of them seem to have studied Geoffry of Monmouth.

A writer in the Augusta Chronicle has presumed "there will not be a bale left in Great Britain, in January, 1826." However, if he will refer to the New York Mercantile Advertiser, of the 8th of April, (or Charleston Mercury, of the 19th of April,) he will find he has made a slight mistake, as to the consumption of Great Britain, of *only* 258,446 bales!

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* See my last observations on Mr. Walsh and the cotton trade.

† See a communication in the Farmer, of 31st December, (vol. 6, p. 321,) dated 7th November, 1824.

RED CLOVER AND RUTA BAGA.

Mecklenburgh County, N. C., April 19, 1825.

Dear Sir,

I must give you a description how the Northern Red Clover grows in this section; also the Swedish Turnip or Ruta Baga.

On the 26th February, 1824, I measured out one acre of old worn out ground, consisting chiefly of red clay; I broke it up in depth about 7 inches—I then hauled out 7 loads stable manure, 7 old ashes, 7 of old lime, from the lime vat—21 loads in all; then harrowed it and broke it up again; and then sowed four quarts of red clover seed, with half a bushel of oats on it, and harrowed them in the 1st of March. In two weeks the oats and clover came up, and grew very well, particularly the oats and weeds, which I thought would have destroyed the clover. About the 25th of June, I had the oats and weeds mowed off, and the clover took a start to grow—but after that time we had a severe drought, which burnt nearly all the tops of the clover. Towards the fall it recovered from that and kept green through the winter. I pastured it down with colts for about three weeks. The last of February, 1825, it took a start to growing; since that time its growth has been astonishing. I have been cutting at it now for two weeks for my horses and cattle, and all are remarkably fond of it. Where the ashes were thrown the clover is the best, generally about 2 feet high; the stable manure second best; the lime does very well, though not so good as either of the others; and what is still more surprising, on the ground where there was no manure thrown, the clover is not 2 inches in height, and quite thin, whereas the other is tall, thick, and quite rank.

The Ruta Baga I sowed the 29th July, in small ridges about two feet apart, and 18 inches in the drill. They came up well; I gave them two dressings with the hoe; they were the finest I ever saw, measuring from 20 to 25 inches in circumference. Stock of all kind are very fond of them. They have surprised those people in this county that have seen them, as they are a new thing here; and they have more strength than the white turnip.

The Millet that I cultivated last summer, grew large and well, but the animals prefer our meadow grass to it. It might do pretty well for a manure, by burying it in a ripe state. The Egyptian Grass seed I could not get to grow at all.

I remain, with respect, yours,

JONAS C. RUDISILL.

ORCHARD GRASS.

Carrington, Del. May 1, 1825.

I have often read and heard so much said of the value of orchard grass, as induced me to try it. I sowed two acres in my orchard very thick by itself, and alongside of it red clover; no difference in the quality of land. The first year mowed the clover, a good swarth, the orchard grass not worth mowing, turned the hogs and horses on it—they kept eating the clover, but never touched the orchard grass, except when they were drove through it, and then only with their hoofs. When hard frosts had killed the clover and other pasture, the horses and cows would eat it, though sparingly.—The second year, the orchard grass got into coarse, tussocky bunches, grew very rank, and made coarse light hay, little, if any better, than oat straw that was cut green. It is not ten days earlier pasture than clover, and not half as good; the hay no better than millet, which is bad enough. *A horse that has been kept on the best clover and timothy hay for a length of time*, will eat oat, rye or wheat straw, in preference to the good hay, for a day or two. I suppose they like a change, and accounts for their eating orchard grass and millet straw in preference to timothy, as I have seen stated; but keep a horse on millet or orchard grass for a month, after he has been eating good timothy and clover, and if he does not fall off and look the worse, he must be very different from my horses. When I first gave them millet, they left the timothy and eat it greedily—so they did oat, rye and wheat straw; but after a day or two they would pull all the millet, &c. under their feet, and refuse eating until hunger forced them. I feel so satisfied with the trials I have made with orchard grass and millet, that I shall never sow any more for a crop. On strong rich land, I would advise to sow as much orchard grass as is sufficient to keep the clover from lodging, *and no more*. I am fully of the opinion it is the best grass to sow with clover *to prevent its lodging*, we have, on account of its ripening at the same time the clover does; but the hay is not so good as timothy: cutting the latter before it is in bloom injures it, and the clover is always ready for the scythe two weeks before the timothy.

THOMAS MASSEY.

THE WASHINGTON EXPERIMENT WITH PLOUGHS.

I have read the trial of ploughs at Washington. Wood's, or Freeborn's plough, appears to have run heavier than the Georgetown plough made by Davis. Query—If the Wood's plough was *not a fallow plough*, the mould board of which is much shorter in the ear than his *sod plough?* If it was a fallow plough and the trial was made on *hard ground that had been a long time* unploughed, *the trial is incomplete*. Wood's, or Freeborn's ploughs, are made on the principle of an inclined plane, as laid down by president Jefferson, in the first volume of the New Edinburgh Encyclopædia, Am. ed. p. 242, and diagrams for constructing the mould board with the least possible resistance, plate 6th, fig. 1 to 10, and is the only scientific rule I have ever seen.* These ploughs run easier to the eastward than any others they have tried, and have taken the premiums at Brighton and other places. Col. Timothy Pickering told me they had the preference in his neighbourhood to any others. I have three of different sizes, and for different work. I prefer them to any ploughs I ever used; they each save 3 or 4 a year in smith's work, besides the time lost in taking them to the smith's shop, which is as much more.

T. M.

DISEASES OF HOGS.

On the 13th February last, I had a sow heavy with pigs, and so weak in the loins as to drag her hinder parts, and could not stand: penned her close. On the 14th, had an incision made through the skin over the right kidney, 2½ or 3 inches long; raised the skin on either side of the incision, so as to admit the forefinger to the second joint; pulverised a small table spoonful of rosin, and slipped it with the finger under the skin; then sewed up the incision with three stitches; same evening the sow was walking. On the 20th, having all this time been fed on corn, boiled in ley of wood ashes, she was apparently well. On the 21st, farrowed, pigs and sow doing well.

Last fall, my hogs had the sore throat. I had tar put in a trough; sprinkled powdered sulphur on it, and then corn; all of my hogs but one could eat of it; that one could not open his jaws: when lying down he would be heard breathing some distance. It occurred to me that blistering might save him. I had a shovel full of coals and hot embers emptied on the back of his neck, as he lay; he mended immediately and got well. These two experiments have grown out of the rational, and medical gentlemen may account to you, perhaps, for their success. None of my hogs died with the sore throat, although the neighbourhood lost many.

Yours, MARK HARDIN.

SHEEP AND CATTLE POISONED BY IVY—CURED BY THE USE OF EGGS.

Loudon, April 6, 1825.

Sir,

Through the medium of your paper, I beg leave to communicate to the farming community, what I deem an interesting circumstance in the management of that valuable animal, the sheep; and knowing the interest which you take in all such subjects, (proofs of which you have often given us,) I shall make no farther apology for so doing. However we may differ as agriculturists and manufacturers, and quarrel about these conflicting interests, sheep are certainly a valuable part of our rural economy. Having lately been a witness to an efficacious remedy in an incidental disease to which these animals are subject, I feel a strong desire that the knowledge of it might be made general to all the growers of wool and lovers of mutton. I believe, Mr. Editor, that the laurel, or ivy, as it is commonly called, (not the magnolium,) is very generally known to be destructive to sheep. But I am of opinion that sheep very frequently die from eating it, and the owner or shepherd is all the time ignorant that this poisonous evergreen was the cause. In this way, a few days since, I had nearly lost a number of my very best sheep; which I certainly should have done but for a timely discovery of the disease, and also of the antidote. A very small portion of this "favourite of the ancients," taken into the stomach of a sheep, in a few hours will occasion his death. The symptoms are foaming at the mouth, then vomiting the half masticated leaves and green juice, by which the mouth of the animal is discoloured—next succeeds great debility, the creature staggers, and death soon puts an end to the hopes of the shepherd. As soon as I discovered my sheep with the symptoms just mentioned, knowing there was laurel in the field, and suspecting the cause, I immediately repaired to the spot, and found they had been eating it. By the advice of a worthy neighbour, they were driven up, and an egg given to each of the diseased, in the shape of a natural bolus, by simply breaking the egg, and slipping the yolk and as much of the white as practicable down the throat of the animal. To five or six of the sickest, I gave a goose's egg each. This prescription being so singular and simple, I watched, very particularly, its effect. Several of the sheep, soon after swallowing the egg, vomited up the leaves and green juice, but none of the egg was discharged along with it. Perceiving in a short time that they were evidently not worse, they were all turned out but one, which was expected to die, and left for further attention.—About three hours after I again examined my flock, fully calculating on the death of several at least. With the exception of four they were all eating, and apparently sprightly. The next morning none of them showed marks of disease. It is worthy of remark, that several of the above mentioned sheep were with lamb, and that nearly all the diseased were among the best of the flock. I infer, that possessing stronger appetites and possibly more wantonness, they ate more readily and plentifully of this poisonous shrub. Like most other poisons of the materia medica, the laurel possesses valuable medicinal properties; but as there is no scarcity of it in our country, I would advise every breeder of sheep carefully to eradicate it from his farm, or field at least. It is equally destractive to all other stock. Among the Alleghany mountains, where the laurel may be said to be indigenous, I am told that cattle are often poisoned by it, and eggs are in common use as the antidote. The dose for a cow, four hen's eggs. But this shrub, so properly called lamb kill, is also very abundant in many places between the mountains and the sea coast. It grows on lofty rocky cliffs, in the coldest exposure and most barren soils.

I believe that the steep northern banks of most of our rivers are well provided with it, so far at least as their estuaries extend. The antidote to the poison is so cheap, so easily administered, and so quickly efficacious, that the knowledge of it deserves to be widely extended. And it is, perhaps, worthy of investigation, whether eggs are not useful in other poisons of a similar kind. Hoping that your valuable paper may long afford information to the agriculturist,

I remain, very respectfully,
Your obedient serv't,
Helvetius.

PROCEEDINGS OF AGRICULTURAL SOCIETIES.

Communicated by the Agricultural Society of the Valley, for publication in the American Farmer.

BROOKING'S THRESHING MACHINE.

The following letters from two distinguished individuals, in commendation of this valuable machine, were read at the last meeting of the Agricultural Society of the Valley, and ordered to be printed. The proprietor, Mr. Brooking, is now at capt. Barton's, in this county.

Washington, December 12, 1824.

Dear Sir,

I did not receive your letter till just upon the eve of my departure for Washington, or I should have done myself the pleasure of answering it sooner.

You ask me to give you all the information in my power, in relation to the machine constructed by Mr. Brooking. They are very much used in the county of Orange and the adjoining counties, and are, I believe, approved by all. With regard to the quantity which can be threshed per day, I am not able to state it with precision, for this reason—that, unless where the wheat has been immediately about the machine, it has always threshed it as fast as my team could supply it; indeed there are frequent pauses, in consequence of threshing faster than it is hauled. You will understand, that it is our habit, not to stack the wheat in large stacks, but to put it up in the field in shocks, and to haul it as we thresh it. This is usually done very soon after harvest; the wheat in the chaff is thrown into the granary, and thus is protected from the weavil. Four good horses are amply sufficient to operate them, and, when ordinary care is used, without injury to the horses. I do not think that they would perform more laborious service, than in a wagon with the ordinary loading. As to the duration of the machines, I cannot speak with certainty, further than to say, that one of mine has been in operation, I think from twelve to fourteen years, and promises, from appearance, to be capable of service for many years to come: they will, of course, occasionally require some little repair, which however is altogether inconsiderable. I should think seven hands sufficient to attend to one, excluding from that number those who are engaged in loading the carriages in the field, and in driving the carriages: and indeed that part of the hands engaged in driving the horses which operate the machine, may be (except one.) little boys of but little service any where else.

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* For all these, see American Farmer, vol. 2, p. 187.

You are at liberty to lay this letter before the society. I regret that my professional occupations have so absorbed my time as to prevent me from giving you that detailed practical information derivable from the close personal superintendance of a farmer who attends to his own affairs.

Yours, respectfully,
P. P. BARBOUR.

Wm. M. Barton, Esq.

—

Washington, December 15, 1824.

Dear Sir,

Yours of the 20th ult. was received this morning. I answer it with pleasure, because, as you justly remark, I take a deep interest in the agricultural improvements of my native state; and because also, Mr. Brooking (James, I presume,) is a very worthy man, whom I should like to see succeeding.

Of the threshing machine alluded to in yours, I have had five built on my estate, having used them for near twenty years. This fact of itself is the best evidence you can have of my conviction of their utility. Several of these machines were built by Mr. Brooking and his brother. They are capable, with a sufficient force, of getting out almost any quantity. I usually drive 6 small mules, about equal to four of your horses in strength. For a constancy, 150 bushels a day is as much as we thresh, to a machine. Running two a day on different parts of my estate, we get 300 bushels, which soon enables me to clean my crop. One of my distant neighbours, captain Wm. Mallory, in the presence of several of his neighbours summoned to witness the experiment, got out upwards of 40 bushels in an hour: but his wheat was short in straw and very good. When the wheat is long, the quantity threshed is of course diminished. I feel no hesitation in saying that any man who raises 500 bushels of small grain, should have a machine. I estimate that by them I have been enabled to raise a third more of wheat than I could without them. The time formerly appropriated to treading, is now employed in fallowing. My greatest crop, made in 1819, was 7500 bushels. To tread it would have required, with the loss of time from actual bad weather, and from the fear of such weather, the whole of the autumn. As it was, with the machine, I threshed it in about a month.

I regret not to have received the proceedings referred to. I thank you, however, for your kindness in sending them—they may yet come to hand.

I offer you my respects,
JAMES BARBOUR.

Wm. M. Barton, Esq.

[On reading the above papers upon their being sent to us for publication, the same defect was discovered which too often occurs in such cases—to wit: an omission to state the *price* of the machine. That is the first question asked by farmers on reading accounts of newly invented agricultural machinery, and no account of them should ever be published without stating the whole cost to be incurred in putting the machinery in motion, and the force and attendance required to keep it going. We have waited for this information in the present instance, and the following is the result, being an extract of a letter from Wm. M. Barton, Esq., the zealous and indefatigable vice president of the Agricultural Society of the Valley, to H. S. Turner, Esq., one of the best and most enlightened practical farmers in the United States.]

"Brooking's machine is turned by four horses, expending about the same labour that is usual on a farm (many of my neighbours who witnessed our experiment, say much less.) The horses walk upon a path of 30 feet diameter, and are hitched to 4 levers running through a perpendicular shaft, on the head of which is a cog wheel driving a cast iron wallower fixed upon a shaft running into the beam: within the barn upon the shaft is another wooden cog wheel, which works a cast iron spur upon the axle of the drum—so that the beaters are operated by two large wooden wheels and two small cast iron ones; thus making the machine remarkable for its simplicity of construction. It occupies within the barn a space 20 feet one way and 10 the other. The straw is thrown out of a window cut opposite the end of the machine, by netting attached to it. The wheat falls within, prepared for the fan. It is said these machines will get out 200 bushels of wheat in a day. Having no wheat unthreshed, I cannot test this fact. You will recollect, however, the Secretary of War, and his brother, Judge P. P. Barbour, state in their communications to me on the subject, that "for a constancy their hands get out one hundred and fifty bushels a day." I threshed one hundred and twenty-six bushels of oats, with seven hands, in two hours and thirty-one minutes. *It was remarkably well done.* From this experiment I believe two hundred bushels of wheat can be threshed daily.

"Brooking charges $120 for making these machines, his employer finding every thing. The total cost may be set down at $200.

"The following is a list of the stuff required for a single machine:

5	pieces	15	feet long,	4	by	16	inches square
4	do	12	“	3½		14	“ “
4	do	14	“	3		12	“ “
3	do	12	“	4		16	“ “
3	do	10	“	3½		14	“ “
3	do	9	“	3		10	“ “
4	do	9	“	5		10	“ “
3	do	12	“	4		7	“ “
2	do	8	“	5		5	“ “

14 scantling 14 feet long, 3 by 4
100 feet of common inch plank
75 do of three-quarter plank

The above to be of good pine and well seasoned;

3	pieces	12	feet long,	3½	by	9	inches square
3	do	12	“	3½		5	“ “
3	do	12	“	2½		12	“ “

of good white oak, and seasoned;

One shaft 10 feet long, 22 inches diameter, hewn 16 sides; one do. 16 feet long, hewn 12 sides, either pine or oak; one beam 32 feet long, 11 by 11 inches square at each end, and 22 by 11 in the middle; two levers 30 feet long, 5 by 12 inches square, of pine, if possible; 300 cogs 14 inches long, 2½ by 4½ square, split out and well seasoned."

"I shall with much pleasure obtain for you, whenever practicable, from my northern friends, information relative to the threshing machine described in No. 45, vol. 6, American Farmer. I have for some time entertained the opinion, that no machine operated by two horse power, *could thresh well a quantity* that would justify its purchase. I believe the draught of two horses cannot possibly keep up that regular motion which is so essential to clean threshing. I shall be much pleased, however, if facts prove me to be in errour. I know the inventive talent of the northern people, and to them we have been, as we shall continue to be, indebted for much that is useful."

The foregoing is preceded by the following introductory remarks:

"The desire I felt of giving you every possible information, derivable from unquestionable sources, as well as my own observation, in relation to the threshing machine I have just got in operation, has prevented my acknowledging the receipt of your letter until this period. I now do it with much pleasure, because I believe I can, with propriety give such a description and character of the machine as will tempt your public spirit to an introduction of it in the county of Jefferson, where, in my opinion, there is scarcely a farmer who should not be in possession of one, and who would not find its labour-saving properties amply repay him, in one or two years, its first cost."

HORTICULTURE.

Strawberry—Genus, *Fragaria;* Class, *Icosandria;* Order, *Polygynia.*

District of Columbia, May 8, 1825.

Dear Sir,

On seeing your inquiries, made in the American Farmer of the 6th inst., as to the sexes of the strawberry plant, (*fragaria,*) in the desire to be serviceable to your correspondents, in return, in some small degree, for the valuable information I often receive from you and them, I immediately resorted to my strawberry beds, with the design of furnishing you with some plants of the hautboy, male and female: (commonly so called:) but, as I apprehended from the state of the season, I found the flowers passing away, and in such a state, that I fear it will not be easy to judge accurately of their formation, or to take drawings from them. A few of them are, however, sent with this. Of the male plant, I could find no flowers less advanced than those enclosed—they having generally performed their functions for this year.

Not having at hand the numbers of your last volume, I have not been able to turn to that to which you refer for instructions on the subject, from a Maryland horticulturist; but in what you quote from him, there is no doubt he is correct. It is only in the hautboy variety (*fragaria muricata.*) that any difficulty in the culture is experienced, on account of the sexual difference in the plants.

The *fragaria* is, by botanists, assigned to the class *icosandria,* consisting of such plants as bear hermaphrodite flowers, of a particular character, and capable, within themselves, of performing all the operations of fructification; and this is the class from which is derived our most esteemed fruits—the order is *polygynia,* (having many styles,) and they are described as having the *perianthium,* one leafed, ten cleft—petals five, inserted in the calyx—filaments twenty, shorter than the corolla—anthers lunular—germs numerous, very small, collected into one head—styles simple, inserted at the side of the germ—stigmas simple.

But the variety called the hautboy differs from this general character, (believed to be common to all the other varieties,) inasmuch as its female flower at least, is an imperfect hermaphrodite—imperfect as to the male organs. On inspection, the filaments appear thicker and shorter than in the scarlet and other strawberries, and the anthers are small and effete; and experience proves that these flowers are, of themselves barren, or at best produce small and juiceless fruit. The germ is of the proper size, and is found, when properly impregnated, to be fruitful. In the male plants, on the contrary, the filaments are longer and more erect than in the common strawberry, and they have the anthers perfect, and the germ smaller—this too, is believed then to be what botanists term an imperfect hermaphrodite, but predominating in the male organs—as the other predominates in the female organs—and that thus dame nature has, in her whimsies, permitted two mules in the vegetable world, when sufficiently approximated, to procreate and continue the species.

In practice, it is well known to the observing horticulturist, that there being, of this plant, but a small proportion ordinarily of males to that of females, the beds will, if nature is left to herself, be in great part barren—and that to remedy this, it is necessary, in planting them, to intersperse the males among the females, in a certain ratio. One to about twelve or fifteen, is enough; and the most attentive keep a separate plat of male plants, carefully treated, for the purpose of the necessary occasional supply to the fruit bearing beds. M.

HOLLY BERRIES.

1st *May*, 1825.

Dear Sir,—I send you some holly berries. If disappointment frequently happens respecting this fruit vegetating, it must be attributed to an unfortunate selection. The trees are distinctly male and female; some producing fruit, while others blossom and never fruit. My garden contains several trees of each sex. I recommend as the best method known to *me*, that the berries be placed in a barrel, half barrel, or keg, leaving a few holes bored in the bottom; that this vessel should be placed in the shade, and where it may receive the drip from the gutter or eve of a house, and there to remain through the summer and autumn, and in the month of October drill the seed in a clean piece of ground, covering very light, and best with a coarse wire sifter. A cool and well shaded spot should be selected, the young plants being impatient of sun. If, early in March, after they have come up, you discover that they have been thrown up by the winter's frost, you should carefully *sift* some good earth over them, to a sufficient depth to cover the roots; allowing for the light sifted earth to settle. In the seed-bed they should remain three years, and in February, March, or April, according to the climate, they should be carefully transplanted into a nursery in rows three feet apart, by eighteen inches in the drill; and in this they should remain until about two feet high. It is in vain for you to expect a perfect hedge, unless your plants are of equal size, and equal vigour; I do know that it is almost impossible to fill a vacant place in a strong growing hedge of *any kind;* when, therefore, you intend to plant your hedge, let your ground be neatly prepared, and select from your nursery, beginning with the largest plants. It is an object that they should be well rooted, and if possible, the roots should not for five minutes be exposed to sun or wind. No plant suffers more than the holly, though all evergreens are more affected by exposure than deciduous trees. The Spring is the proper season to plant all evergreens, and at the moment when you discover in the bud symptoms of growing. The holly is the most beautiful and permanent of all ornamental hedges; bears clipping; is not, like the cedar, injurious to vegetation, nor does it, like that, become ragged and unsightly; and, I think, has in the sharpness of its leaf, greater power of resistance than the cedar. To insure productive seed, I have surrounded a fine berry-bearing plant with four male plants. No tree succeeds better by layers than the holly.

I am your ob't. serv't. F.

RURAL ECONOMY.

HAND MILLS.

New York, May 6, 1825.

John S. Skinner,

Sir—Mills of the kind referred to in the enclosed letter from Col. J. H. Powel, corresponding secretary of the Pennsylvania Agricultural Society, are in general use throughout England, by farmers and gentlemen who keep horses. They are calculated for the purpose of breaking oats and barley, fine enough for hogs and cattle, splitting beans or peas, and grinding malt for private use. You, no doubt, are aware that it is very common, in England, for private families to brew their own malt liquor. In fine, it is a complete family Mill, and I have no doubt, when it has had a fair trial in this country, its merits will be appreciated.

The price I have fixed upon a mill of the size sent is $25. After it has been exhibited, have the goodness to sell it for my account.

Your obedient serv't,
ZACHARIAH PARKES.

Dear Sir, *Powelton, May* 2, 1825.

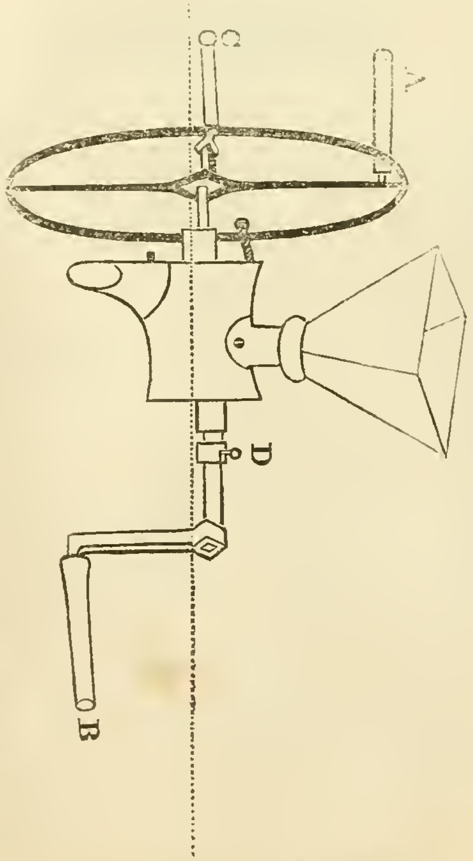
Mr. Parkes, of Birmingham, has deposited at my farm an effective, and well contrived Kibling Mill, for grinding Indian corn, oats, rye and malt, which I am inclined to believe will be useful to persons whose farms are distant from grist mills.

He has shown great liberality in giving every opportunity of fair trial, and I am satisfied, is himself assured of its utility.

As he wishes you, to make an experiment at the Maryland Exhibition, I trust you will pardon my requesting you, to give as much publicity to his intentions as practicable.

You know, that I am not disposed to promote the fanciful inventions which some of my neighbours run away with, and therefore do not hastily take up a favourable impression, merely because a thing is new.

I am yours, truly,
JOHN HARE POWEL.
Cor. Sec. Penn. Agr. Soc'y.



Directions for fixing the Improved Wheat Mills, manufactured by Zachariah Parkes.

Fix the mill firmly on a post large enough to fill up the checks or side plates, keeping the spindle at the height of about 3 feet from the floor, and the wheel end of it about 1½ inch lower than the other. When two persons are employed in turning, the power is frequently applied at A and B, in which case they lose their power at the same time, which causes a jerking motion; whereas, by applying the power at C and B, as one loses, the other acquires it in the same proportion—and the result of this arrangement is an uniform motion. The mill is set to grind fine or coarse by a screw on the wheel side: being set to your mind, fix the ferrule D close up to the bush; by this means the mill is kept up to its work; the screw may then be turned back a little to avoid the friction against the ball. A little neat's foot or sweet oil, should be put into the bushes frequently.

HORSE MILLS AND COTTON GINS.

South Carolina, April 29, 1825.

Sir,

Having obtained some information relative to Mr. Ellicot's (of Philadelphia,) Saw Mill, I beg to transmit it to you, with a view to creating a greater interest in so useful a machine.

The castings for a two or four horse power Saw Mill will cost $120, the wrought iron work $77, the wooden work $103, patterns $12, the timber $76—exclusive of the timber $312.

As the cotton gins have horizontal wheels, they may be made to answer for the saw mill. The latter alone would cost $260—a grist mill, in addition, from 50 to $150, according to the size of the stone. A *six* inch stone would grind from 30 to 35 bushels of grain *per diem.* A *fifteen* or *sixteen* inch stone *has* ground 55 bushels. The whole is very simple, but my informant is more pleased with the grain than with the saw mill, as a more useful machine on a plantation, for which he thinks it admirably adapted. Separately, the grain mill would cost from 60 to $160, in order to be made ready to be attached to the horse propelling power.

I proposed to obtain a drawing, but was unpleasantly disappointed by learning that Mr. E. is so much occupied in completing the orders he has received for these mills, that he cannot now spare time. However, I will hope that, ere long, he will be able to give you a wood cut for the Farmer, of the saw mill alone, the grist mill alone, and both, connected with the cotton gin.

Of its value upon plantations with a force of 100 negroes, and a consequent weekly allowance of 25 bushels of corn, costing a toll of 3 bushels for grinding, besides, perhaps, a day's journey for a wagon and team, you will easily form an estimate—not to say any thing of the value arising from an ability to crush the corn for the stock. We may also take into account the use of the saw mill, and the saving of the sawed timber bill to all plantations. In many districts of this state (Colleton, for instance,) where the shape of the country does not give a fall for saw mills, they would give value to many acres of land, now, comparatively speaking, valueless. One of their great benefits will be found in the means they afford to lesser capitalists, to employ themselves for their own and their country's benefit.

These considerations unite in making me hope that Mr. E. will, at a convenient period, enable the public to avail themselves of his ingenuity, and enable him to be rewarded for his exertions.

I am, sir, &c. Amphicon.

INTERNAL IMPROVEMENTS.

RAIL-WAYS, CANALS, ROADS, &c.

No. 1.

The subject of internal improvement having attracted the attention of our citizens, the following remarks, several of which are the result of personal observation, during a tour in Europe, contain some hints which may not be uninteresting.

The great object of roads, canals, rail-ways, bridges, steam and other engines, is to transport a given weight, or to produce a given effect, with the least quantum of labour, and with 1. expedition, 2. certainty, and 3. safety.

In the following essay it is intended to inquire, to what extent these objects are attained by these several inventions, previously submitting the following observations. In these labour-saving machines, if more labour (or what is equivalent, money,) is expended in their erection, than can be saved by their assistance, the sound dictates of political economy would forbid their adoption; this inference may appear a truism to many, but has been so frequently neglected in practice, to the great detriment of commonwealths,* that it cannot too frequently be presented to our view, the neglect of it having occasioned losses of enormous magnitude to individuals, who have embarked their capital in these enterprizes from motives of patriotism or interest, without a due consideration of the causes which alone could produce the result they anticipated. Capital, (which otherwise would have been employed in agriculture, commerce, or manufactures, and have produced the usual returns of interest,) has been squandered in schemes, which the projectors wildly imagined to be improvements, which have not enriched the public, whilst they made them poor indeed. In these instances, individual losses are national impoverishment.

It is not intended to assert that the production of the average rate of interest of any country is the exclusive test of the utility of works constructed for the public accommodation.

When works are executed at the expense of the government, although no tolls be collected, (which is the case, generally, on the *continent* of Europe,) the nation may be benefited by their operation—if, firstly, the commerce, which is transacted by their assistance, be sufficiently extensive to enable the government, (if deemed expedient to levy tolls,) to receive an amount equivalent to the interest of the capital expended in their erection and annual repairs, although no tolls be collected in fact, *if the capacity of yielding them be established by any evidence,* the effect is beneficial. The state will, in this case, be benefited by the additional wealth of her inhabitants, and the increase of her population—(the certain consequence of the facility of maintenance, produced by an easy access to market:) thereby affording to government additional objects suitable for taxation.

Or, 2d. When tolls are levied, and for a few years after the execution of the work are deficient, *if afterwards they amount to interest on the deficiency and capital united.* In the event of war, the transport of munitions may be sufficient to justify the execution of works which would perhaps be useless to a considerable degree in peace. The policy of constructing them will, in this case, depend on the comparative duration of war and peace; sudden invasion may require the forwarding troops and supplies with expedition and economy of labour; in accomplishing this object, (the benefits of which are beyond calculation,) roads, bridges, canals, and rail-ways, from the remarkable facility they afford to transportation, may then prove the salvation of a country. Our last war with England afforded melancholy demonstration of the force of this argument.*

Having premised these observations which are applicable to every species of public works, it is intended to inquire the extent to which 1st, roads, 2d, canals, 3d, rail roads, are severally conducive to the objects mentioned in the commencement of this essay. In this place we must repeat the demonstrable law of motion, "*that any given weight, however great, may be transported to any given station, by any power, however trifling—provided the line of motion be horizontal, and friction and the resistance of the atmosphere be removed.*" This, it is obvious, can never be completely attained in practice; the most simple and perfect machinery can overcome a portion only of the obstacles by which motion is impeded. Various methods have been attempted to partially accomplish this object. 1st. Roads are the most ancient and obvious improvements in the art of transportation; which was previously effected by dragging the weight, unassisted by wheel carriages, over the natural surface of the country, abounding with rocks, swamps, trees, and other obstacles. In some countries, where civilization has made little progress, this tedious and laborious method prevails at the present hour. Sometimes the weight is placed on the backs of men or other animals: this prevails in Spain and the late Spanish colonies generally. The prodigious advantage resulting from science may be appreciated by reflecting that a weight, which, on an improved rail-road, could be transported with facility by the agency of a single horse, would, among our red brethren, require the laborious application of a 1000 squaw power to remove.

Wheel carriages were in due time invented; on a common road, or even turnpike, they encounter numerous obstacles: 1st, if the soil be soft, (which is always the case to a certain extent, particularly in moist weather, or in sandy districts,) it accumulates in front of the wheels, and *however level the general surface of the road may appear, the carriage wheels are perpetually toiling up hill.* 2d. Deep ruts occasion so much friction, that the progress of the carriage is always impeded, and sometimes entirely stopped, and only extricated by the application of very great force. To these may be added, 3d, impediments from stones and other opposing bodies, and 4th, frequent hills of great elevation.

Turnpikes are the next improvements. As they are usually executed in the United States, the impediments are numerous and powerful,—composed of very large masses of rock at the foundation, and small stones with soil at the top, which, invariably sinking to the bottom, expose the rugged surface of the foundation covered with mire.

These and other obstacles prevail almost invariably on the turnpikes in the United States. The superiority of the turnpikes in England, constructed in many instances on the principles of M'Adams, is apparent to every observer. They are entirely composed of very small angular and equal pieces of rock, a heavy roller passed over the surface, and the motion of carriages soon occasions a consolidation; as no earth is used, rain occasions but little mud on this hard, solid and smooth surface,—the phenomenon of a carriage disappearing in the mire, of course, occurs rarely! The route usually winds around the bases of the high hills, in place of adhering to the absurd and unpicturesque mathematical straight line, so much admired in the United States, under the erroneous idea of saving distance, and consequently, labour. If, for instance, the distance in a straight line of two places be five miles, and the hills, in the aggregate, equal to 1000 feet, it will require the same labour and time to transport a given weight, one ton for instance, as if the road, by winding around the bases of these hills and thereby preserving a level, were increased to double the length, viz. to ten miles. This is demonstrable in the following manner: One horse can draw on a level road on the plan of M'Adams, one ton, or one ton and a half, the wagon inclusive, at the rate of three miles per hour,* whereas, his power of draught by the dynamometer ranges only from 80 to 180 pounds—the maximum obtained for a continued length of time from excellent horses, with the foregoing velocity,† assuming the average at 120 pounds, (a liberal estimate,) a horse can consequently raise by the medium of a pulley, or other power where the friction does not exceed twenty pounds—*one hundred pounds perpendicularly at the rate of three miles per hour;* or a horse can raise perpendicularly only one thirtieth of the weight he is capable of drawing horizontally, with the same velocity, on a turnpike.

Even the diminution of distance is inconsiderable. On some steep hills a line over the summit, or on a level around the base, is nearly of similar length; this occurs in a hill of one hundred feet elevation, when a road over its summit, is one thousand feet in length—if the remaining sides be abrupt, a road may be sometimes conducted around the base, of a length not greatly exceeding the former; a weight could be drawn on the latter in half the time, or with half the labour it would require on the former; or if the level road should require double the distance, the weight would require only the same moving power.‡ The delay always occasioned by hills has given rise to the proverb, "the longest way round is the shortest way home." By the absurd practices alluded to, even ground is not saved; for the extra labour expended in toiling to the summit of these hills, requires an additional number of horses to be maintained for this purpose; the ground requisite for their support is incalculably more than the trifle saved by the shortness of the road. An apparent exception to the policy here recommended must now be mentioned. Several persons accustomed to travelling, have observed, that when a horse has for a long time drawn on a perfect level, *if a very slight ascent and descent* occurs, he appears to be refreshed; the reason assigned is, that another set of muscles are called into action, allowing those fatigued some repose: some difference of opinion, however, prevails on this subject.

Having now considered the benefits resulting from roads; it is proposed to institute a comparison with canals, in reference to the objects stated in the commencement of this essay.

1st. The expense of constructing a turnpike *in a proper manner,* is *almost equal* to that usually expended per mile on a canal. Part of the National or Cumberland road cost 17,000 dollars per mile; and part of the Lancaster* turnpike near Philadelphia, 15,000 dollars per mile: these roads, if *M'Adamised*, would have cost more on an average in the first instance; but the expense for repairs would be considerably diminished. The repairs depend, in a great measure, on the use to which the road is devoted, and the frequency of the same. On some roads in the United States, the expense is equal to interest on the principal of the sum expended in their construction. Near London, in consequence of the frequency of travelling, 1000 pounds sterling per mile is annually required to preserve the great road in repair.† The repairs of canals, when *correctly constructed*, are less expensive than those required on a road *frequently used;* the difference which, of course, should be added to those expended on roads, will exhibit the relative expense of both to the public.

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* For instance, the celebrated canal du Midi, usually known as the Languedoc canal, which has been the subject so frequently of injudicious eulogy, is an instance of this misapplication of national enterprise; no toll is at present levied on the boats traversing its surface; but the amount of commerce is so small that it is acknowledged that two per cent. per annum on the principal expended could not possibly be collected, if it were attempted. This work, however, has *indirectly* been very beneficial, as it induced engineers to turn their attention to the subject of canals; and although not the first executed, may be justly styled the mother of inland navigation.

* See the report of Mr. Gallatin to Congress, on this subject.

* See M'Adams on Roads. See also Reports of the Road Commissioners.

† See a description of the dynamometer in the Encyclopedia. Also, an account of some experiments performed by the Philadelphia Agricultural Society, in which a much greater power was exerted, *for a short time,* than the above. Some more definite and precise term is required in mechanics than horse power. This adopted unit of power is very variously estimated by engineers. See the works of Watt, Smeaton, Fulton, Rennie, &c. where it varies more than the power of a London dray horse compared with a Shetland pony.

‡ The law of gravitation, viz: that the power required in ascending, is gained in descending, is not applicable to roads, for obvious reasons; the surface of the road when hilly, is uneven and rough, this is occasioned by the rains and the methods resorted to to protect the materials: the great fatigue experienced by the horses prevents them from exerting their full power when they arrive at the summit; in descending, great power is required to prevent too rapid a motion, and the wheels are frequently locked; in this manner, the advantage in descending by no means balances the disadvantages in ascending, &c. Many other reasons might be offered; these remarks do not apply to rail-ways to the same extent.

It has been frequently proved by writers on inland navigation, (Fulton, Rennie, Phillips, Brindley, Weston, and many others,) that if a given weight be transported by a given power, on a turnpike road, constructed in the most approved manner, at the rate of two miles and a half an hour, for instance.—about twenty times that weight may be moved with the same velocity, by the same power, on a canal; that is, *cæteris paribus, transportation may be effected on a canal at one-twentieth the expense of the same on a road*, as‡ it appears that the expense of constructing a good road, or of constructing a canal of similar extent, is nearly equal, and as twenty times the amount may be carried at the same expense on a canal as on a road, the tolls on a canal may be reduced to one-twentieth of those demanded per ton on an equally expensive turnpike, and the returns yield an equal interest on the capital expended in these constructions.‖ On many canals, the tolls charged by the proprietors render conveyance by canals almost equally expensive with road carriage; but, as the profit, (amounting, in several instances, to the enormous interest of 140 per cent.) enriches the stockholders, who are a portion of the public—the benefit to the state depends on the number of proprietors; hence the maximum of benefit occurs when the works are owned by government.

2d. In point of expedition, roads and canals are equal; a load can be transported with the same velocity on either, and for the same length of time.—Greater expedition is usually effected on canals, but additional horses are furnished as relays; this, of course, may be equally effected on roads, as it frequently has been when deemed expedient.*

3d. Safety. The wear and tear of merchandize, and the damage from the roughness of roads, and overturning and breaking down of wagons, entitle canals to the preference for the conveyance of merchandize and travellers. This reason will, doubtless, influence all persons who duly regard their comfort, particularly those who have suffered the miseries of that eminently perilous enterprise, a journey to St. Louis or New Orleans.

4th. Certainty. The disadvantages just mentioned, and the frequent unforeseen changes of the weather affecting the roads, always render road conveyance very uncertain.—The time required in canal conveyance may be calculated with more accuracy. In winter, however, roads offer the only means of conveyance.

Having thus briefly exhibited the arguments proving the superiority of canals over the best turnpikes, and *a fortiori* over those in this country, and over common roads; it is next intended to examine the benefits resulting from rail-roads, compared with turnpikes and canals, previously offering a description and historical sketch of the former.

[*U. S. Gaz Phila.*

SPORTING OLIO.

Racing.—The Spring races over the New Market course commence this evening. As the proprietor and the club have made the best arrangements to accommodate the public, and as the course is in excellent order, and many fine horses on the turf, we anticipate high gratification for the lovers of this elegant and useful exercise.

The Lawrenceville races commenced on Tuesday last, when the colt sweepstake was won by Mr. Theo. Field's Gohanna, at three heats, beating four others. On Wednesday, the jockey club purse was taken by Mr. Harrison's horse Aratus, beating three others. And on Thursday, the proprietor's purse was taken by Mr. Harrison's horse Burst-All, beating with ease Mr. Field's horse. [*Petersburgh pap.*

New Market.—The Jockey Club Spring Meeting took place on Tuesday last. Many fine horses appeared on the turf. The course having been newly railed in by the present proprietor, presented a handsome aspect, and, notwithstanding the showers of the morning and preceding night, was in beautiful order. For the sweepstakes, there were six subscribers, but three paid forfeit. The purse was contended for by Mr. James's bay colt by Virginian; Mr. Johnson's bay filly by Sir Archie, and Mr. Field's bay colt Rockingham, likewise by Sir Archie. The filly was the favourite; she took the first heat with considerable apparent ease; but the second being contested, she lost it by half a length, and the Virginian colt proved too hard for her in the rub. The first heat, time, 1m. 55s.; second heat, 1m. 55s.; third heat, 1m. 57s.

On Wednesday, the proprietor's purse for 300 dollars, three mile heats, was run for and taken, after two well contested heats, by Mr. Harrison's mare, beating Mr. Hare's sorrel mare, Mr. Wynn's bay mare, and Mr. Johnson's sorrel horse. The winning mare undoubtedly performed in beautiful style: but in the superior skill of her rider, she possessed, we think, a decided advantage over her competitors—Time, first heat, 6m. 16s.; second heat, 6m. 10s.

On Thursday the Jockey Club purse, four mile heats, was taken by Mr. William Wynn's mare Flirtilla, beating Mr. Harrison's Arab, the latter being in one of his usual fits of obstinacy and refusing to run. [*Ibid.*

Trotting Match.—The lovers of fine trotting were gratified yesterday morning by witnessing a match between a bay horse belonging to Mr. Russell, and Mr. Howard's sorrel horse Defiance, for a purse of 1000 dollars. The distance was three miles and a repeat, and the purse was won by Defiance, in very handsome style. The first heat was won by the bay horse, but it is presumed that Defiance would have come in ahead, if he had not lost a shoe. The distance was performed as follows: first heat, 9 min. 11 sec.; second heat, 9 min. 8 sec.; third heat, 9 min. 6 sec.; total distance, 27 minutes 25 seconds. [*N. Y. Gaz.*

THE FARMER.

Baltimore, Friday, May 13, 1825.

The Editor solicits, on behalf of several of his subscribers, an essay on the distillation of whiskey from *rye* only. It is desirable that the directions, through the whole process, be as minute and plain as possible—as to the proportions, preparation and management, &c. &c.

☞The Editor wishes to procure two or three dozen copies of the 3d volume of the American Farmer, and will pay the full subscription price to any one who may have one to part with.—Does not this offer a good chance to the few who *never paid for it?*

More fine Stock for sale at the Cattle Show.

There will be down from Hagerstown, a fine Jack and Jennet, for exhibition and sale. They are of the large breed; the Jack will be four years old in the fall, and was got by *Sadi*, whose sire was the celebrated "*Knight of Malta*," owned by Col. Fitzhugh, of this county. These animals belong to the estate of the late John T. Mason, Esq.

It is intended by the trustees of the Maryland Agricultural Society that, as far as possible, the society's exhibitions should serve as a resort for the sellers and purchasers of fine animals, such as breeding and saddle horses, bulls, milch cows, fine oxen, mules, jacks, jennets, swine, improved sheep, &c. Also, agricultural machinery; and it is recommended by those who wish to sell or to purchase, to reserve themselves for that occasion. All persons who have fine animals may exhibit them in the society's pens without charge, and if so exhibited, have them afterwards sold gratuitously. Pens will also be provided by the landlord for all other animals which any one may choose to drive there for sale. There can be no doubt that good milch cows, as well as all other animals of superior quality will meet with ready sale at good prices. Notice has already been given, of many fine horses that will be there for sale; to which may now be added, a splendid young colt, sired by Silver Heels, property of Col. T. Emory. The show will take place on Wednesday and Thursday, the 1st and 2d days of June next.

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* The average expense of the Lancaster turnpike was about $9000 per mile; of the Germantown road upwards of $11 000 per mile.

If these roads had been constructed on the plan of M'Adams, the expenditure would have been double that amount. The *turnpikes* would have been double the present width; and as the severe frosts in this state, would probably destroy the road, if the stratum of stones were diminished in thickness, the quantity of stone would be double. The reduction of the stones to the approved dimensions would require four times the amount of labour usually expended on a turnpike of the usual width.—Hence we may estimate the expense of a *M'Adamised road*, at 15 to 22,000 dollars per mile, or 7,500 to $11 000 for a road of the usual width, provided the persons employed in constructing the road be aged persons and children, (who are strongly recommended by M'Adams for this purpose,) but if the labour of adults be employed, (the usual labourers in this country,) the expense would be greatly increased.

Canals vary extremely in expense; on a level, requiring no locks, and through a favourable soil, the expense in this state will not exceed $3000 per mile; but if tunnels, numerous locks, or rock excavation occurs, the expense may be $50 to $100,000, per mile. We may estimate the average cost of canals, (constructed in a scientific manner,) for boats of 25 or 30 tons, at $12 to $15,000 per mile.

† See the Report of the Road Commissioners.

‡ As the tolls on roads, canals, &c. are arbitrary and unequal, they are not included in any of the estimates in the essay, except when specially mentioned.

‖ When the demand and sources of supply are unlimited, if the expense of conveyance be reduced to one-twentieth, the amount transported will be twenty times the quantity previous to the reduction in expense. This theory is confirmed by observation.

* On some canals, the horse, when fatigued, is taken on board the boat, from whence one to supply his place is removed: the economy of this expedient may be called in question.

All editors in the state and district, are respectfully requested to copy the above. A handbill containing a full view of the premiums, regulations, &c. for the next Cattle Show, will be sent or given to any one, on application to the Editor of the American Farmer.

At a meeting of the Trustees of the Maryland Agricultural Society for the Eastern Shore, held at Plimhimmon, the seat of Tench Tilghman, Esq., on the 14th ult., the following resolution was adopted:

Resolved, That there be a Cattle Show and Exhibition of Domestic Manufactures, at Easton, on the Eastern Shore of Maryland, on the *first* Thursday of November next.

TOLL GATES—HOW MANAGED IN ENGLAND.

In answer to an inquiry on this subject, in the American Farmer, of the 8th ult., the Editor is informed by a respectable correspondent, that in Great Britain the general practice is, to dispose of each gate by public, vendue, once a year, to the highest bidder—who takes the risk of collection on himself, and furnishes ample security to the commissioners for payment of his bond. Such, he says, was the practice when he was in England, twenty-five years ago.

COMMERCIAL RECORD.

LATEST FROM GIBRALTAR.

Extract of a letter from the respectable house of Wm. Cozens & Co., dated

Gibraltar, March 25, 1825.

We wrote you the 19th inst., and we have only time to say, that Flour is dull again, owing to the order of its admission into Cadiz having been suspended through some intrigues. We have besides had rain, and *large arrivals of Wheat*.

[The above has, in some measure, affected the price of bread stuffs, as quoted below.—See prices current in the last column.]

Prices of Country Produce,

Reported for the American Farmer from actual sales.

White Wheat, for family flour, from Talbot county, sales at $1.20—1,000 bushels of Colonel Wright's crop red wheat, from Queen Anne's county, $1.14.

Bacon.—Selling here, the hog round, at 7 to 8 cents retail Eastern Shore hams, first quality, 10 to 12½.

Tobacco.—The crop of T. B. Crawford, Esq., near Bladensburgh, Prince George's county, 125 hogsheads, (23 seconds, 102 crop,) tolerable red, a mixed crop, some very good, some quite common,) sold for $8 round. Two hogsheads from Montgomery—spangled, one sold at $21; one at $10. One hogshead, made by Mr. Wm. Cockey, Frederick county, bright yellow, sold at $42 per hundred. George Harrison, of Calvert county, sold one, crop, for $9, one, second, for $13.50, and one, crop, for $18.

Inspections during the week in Baltimore.—At Warehouse No. 1, 550; at Warehouse No. 2, 216—total 766.

Live Cattle—Mr. Vanmeter, from the South Branch, sold a lot of bullocks in this city, to a Philadelphia victualler, for upwards of $5—the price may be quoted, we are told, at about $5.50.

SILVER HEELS—for sale,

But will stand this season at the Canton Race Course Stable,

At twenty dollars the season, $7 the single leap, or $30 to insure a colt, payable the 1st day of October—but $15 the season or $6 the leap, paid on or before 1st of August, will be received in full of said season or leap; half a dollar to the groom in either case. *His season will continue* till first of July. Payments received, and acquittances given at the office of the American Farmer.

Silver Heels got the premium at the cattle show in Baltimore, in 1821. Silver Heels is a fine dapple grey, upwards of 16 hands high, 10 years old the 29th of March, 1825. His colts very fine—in figure, bone and beauty, foot and bottom, he admits of no superior: his pedigree will speak for his blood.

Silver Heels was got by Oscar, who was got by the imported horse Gabriel (sire of Post Boy, Harlequin, and Lady Jack Bull, grand dam of Chance Medley)—Oscar's dam was Vixen by old Medley; grand dam Col. Tayloe's Penelope by old Yorick; great grand dam by Ranter; great great grand dam by old Gift. Silver Heels' dam was Pandora, who at three years old sold for a thousand dollars; she was got by Col. Tayloe's grey Diomed, who was got by the imported horse Medley; his dam by Sloe; his grand dam by Valiant out of the imported mare Calista, the property of Col. Wm. Byrd, of Westover. The above horse Sloe was got by old Partner, out of Gen. Nelson's imported mare Blossom; her dam was got by Mr. Hall's Union; her grand dam by Leonidas; her great grand dam by the imported horse Othello; her great great grand dam by the imported horse George's Juniper; her great great great grand dam by the imported horse Merton's Traveller; her great great great great grand dam was Col. Tasker's imported mare *Selima*, who was got by the *Godolphin Arabian.*

Gabriel (bred by Lord Ossory,) was got by Dorimont; his dam by the famous High Flyer; grand dam by Snap, out of Shepherd's Crab mare (the dam of Chalkstone, Iris, Sphinx, Planet, and other good runners)—her dam was Miss Meredith by Cade, out of the *little Hartley mare.*

Medley was got by Gimcrack (Cripple Godolphin Arabian)—his dam, full sister to the dam of Sir Peter Teazle, was Araminda by Snap; grand dam Miss Cleveland by Regulus; great grand dam Midge by Bay Bolton; great great grand dam by Bartlet's Childers; great great great grand dam by Honeywood's Arabian, out of the dam of the two True Blues. Thus you see, that Medley's blood, so *desirable* among sportsmen, flowed through Grey Diomed, the sire of Pandora, the dam of Silver Heels; and also through Vixen, the dam of Oscar, sire of Silver Heels—who is of course a quarter Medley, and a quarter Gabriel, the best running blood in America.

Gabriel won fifteen races in England in three years, four of them king's plates.—Oscar was a capital runner—his colts, Columbia, Northampton, Partnership, Red Bird and the Maid of the Forest, good runners.

Pandora won the great sweepstakes at Piscataway, at three years old, and afterwards beat every thing in Baltimore, the four mile heats, in great style—(was out of the dam of "Floretta")—she was then put to breeding; her colts, Pocahontas, Red Bird, Aurora, and Silver Heels, all great runners. Silver Heels, at *two* years old, was led over the Centreville Jockey Club course and took the colt's purse; at 3 years old he was winning the great sweepstakes at Washington, when unluckily he fell; the same fall at Easton he won the Jockey club colt's purse; at five years old, he won the first day's Jockey club purse at Easton; at Marlborough the same fall, he made a capital race, three four-mile heats—the first heat he was beat by Mr. Jenifer's Chance colt six inches, (in bad condition,) running the heat over that heavy course (in eight minutes six seconds)—the second and third heats were won, severely contested, by Mr. Johnson, of Virginia, his Boas, a capital horse.

ROBERT WRIGHT.

Baltimore, April 25, 1825.

FOR SALE.

The subscriber has for sale a quantity of Flaxseed Meal, or Oil Cake, an excellent feed for milch cows, &c , which he will deliver in Baltimore. A line put in the Post Office, or left at Wm. Wooddy's printing office, Calvert-street, directed to the subscriber, will be immediately attended to.

JOSEPH ATKINSON,
Ellicott's Mills, Md.

May 13.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	WHOLESALE. to	RETAIL. from	RETAIL. to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	7	9		
COFFEE, W.I. Green, .	—	17	21	20	25
do. Common,	—	16	17	18	20
COTTON, Louisiana, &c.	—	22	26		
Georgia Upland, . . .	—	22	24		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	11	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32	33		
FISH, Herrings, Sus. new	bbl.	2 25		2 50	
Shad, trimmed, new,	—	6	6 50	7 50	
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	5 25	5 50		
Fine, ...	—	4 75			
Susquehanna, superfi.	—			none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	39	40		
Wheat, White, ...	—	1 12	1 17		
do. Red, ...	—	1 08	1 10		
Buckwheat, ...	—	55	77		
Rye, ...	—	37	40		
Barley, ...	—	50			
Clover Seed, ...	—	3	3 25	3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	9			
LEATHER, Soal, best,	—	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8*a*20d.	lb	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 50		1 75	
Pitch, ...	—	1 50	1 75	2	
Turpentine, Soft, . .	—	2	2 50		
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	35	50		
RICE, fresh, ...	c.lb.	3 50	4		
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	26		37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—	28	30		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	10 25			
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by John D. Toy, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

COTTON.

The following communication, from a practical farmer in one of the upper counties of this state, to a gentleman in the vicinity of this town, (Norfolk, Va.) contains much valuable information to those who have but recently embarked in the culture of this valuable staple of our soil, and who cannot be supposed, as yet, to possess full information upon this subject.

"You see many essays in the papers on the management of this crop; but none that I have seen, which meet my entire approbation.—You shall have my course of management and opinions—then decide for yourself.

"Beginners are apt to over-estimate the produce of their crops, and the average is often calculated at one-fourth to one-third more than it turns out. With us, I think, a fair average is about 500 lbs. seed cotton to the acre. Some highly improved lots, the seasons being favourable, will yield as high as 1000 to 1200 lbs. The average of improved lots on a clay foundation may be as high as 6 to 800 lbs. but the general average, I think, of our whole crops, does not exceed 500 lbs., you may safely calculate on 5 to 600 lbs. as the general average of your crops. Your land, in my opinion, will produce cotton very well; but your lightest sandy ridges will always disappoint you, no matter how rich you make them. Cotton thrives best on a deep loam, neither too light, nor too stiff; a clay foundation is always the best. It is believed, that there is nearly the same result with cotton, as with tobacco, on light and stiff soils. On very light land tobacco grows large, is thin, chaffy, and of little substance: on stiff land it is thick, heavy, and of the greatest substance. So it is with cotton: on light soil the cotton stalks may be large, but it will not yield as many bolls; the cotton itself is lighter and the staple not so strong or fine. Weigh a hamper basket packed with seed cotton made on light, and another produced from stiff land, the difference would surprise you—showing that the same bulk produced from stiff is much heavier than that produced from light land. There is much difference in the weight and yield of seed cotton, in the different seasons of gathering. That picked out early will not average 1 pound of ginned, to 4 pounds of seed cotton; as the seed are then green, and consequently, heavy. That gathered late in the fall, in dry weather, will yield 1 lb. ginned, to 3 1-2 lbs. in the seed. It is a mistaken policy to sun the seed cotton much, at the commencement of gathering; when the cotton is green, a day or two sunning is sufficient. After the 1st of October, no sunning is necessary, in fair weather, except for that which is picked out in the morning, whilst the dew is on it. There is no crop that loses so much by evaporation as cotton; it is a thief that never slumbers, never tires, never ceases his pilfering. The seed, and the nett cotton too, are constantly diminishing. Even after it is ginned, if it is not immediately packed, the evaporation continues to a degree that is not even suspected by those who have not examined this fact; it is like a small worm hole in a cask of Madeira; although it goes drop by drop, and cannot be missed from day to day, still, if the leak is not stopped, the liquor diminishes. So with cotton, if it is not picked as soon as gathered, and packed as soon as picked, it is constantly losing, drop by drop—and in a little while 10 per cent. will be found to have passed off into air. If the cotton is dry enough to be ginned, without clogging the machine, it is sufficient. In purchasing seed cotton, sunning it is out of the question, as the evaporation that will ensue is a clear loss.

"There is a diversity of opinion as to the quantity of seed that should be sown to the acre: with us, the smallest quantity is two, and the largest, four bushels; about three is sufficient where you have enough seed, and two will do if seed are scarce.

"The mode of preparing the land varies almost as much as the faces of the planters; and the best way of applying the manure admits of a great diversity of opinion and practice. In the management of this crop I have kept my eye on our most successful planters, particularly Major D. who is, beyond doubt, the most skilful, judicious, and successful of us all. I try to follow his practice as near as circumstances will admit. The result has been favourable.

"Natural land, not intended to be manured, we flush with dagons before Christmas, if we can. If stiff, or wet, and but a small crop pitched, we prefer giving it another ploughing with fluke hoes, just before planting. But since our crops have become so large, we cannot give this second ploughing; and, in many instances, do not flush our land until the months of March and April, or just before planting. When the land is flushed, and the planting season has arrived, we lay off our beds with a fluke plough and mould boards, if to be manured; otherwise, without mould boards, or with very short ones. The most approved distance is 3 1-2 feet apart, which is the common distance with us; but some prefer 3 3-4 to 4 feet. If the soil is very strong, 4 feet is not too great a distance; but, on common land producing about 500 lbs. to the acre, 3 1-2 feet is sufficient. Mine is all planted 3 1-2 feet; although some of my land will yield from 800 to 1000 lbs. to the acre. After the beds are laid off with single dagons, throw up the beds on the furrows; then open the top of the beds, or, as it is termed, split the middle with the shank or helve of the plough: for this purpose, just knock off the plough hoe, and the helve thus left is the best instrument for opening the furrows, especially where the manure is deposited in the drill: for, if a plough hoe was used, it would tear it up, and expose it on the surface. By using the helve only, a sufficient furrow for the reception of the seed is made, and the manure remains unmolested. The dropping of the seed should follow immediately after the opening of the furrow, and the covering directly after the dropping of the seed; so that the earth may be perfectly fresh and moist, which is placed in contact with the seed. This occasions them to come up better and sooner.

"To prepare the seed for sowing, select a place near to water—wet the seed—roll them with dirt or ashes, (the latter preferred, as it is a very slight manuring, and a kind of preventive to the depredations of ants,) then with a hand-hoe stir them until each seed is detached from the rest, and perfectly covered with a coat of the dirt or ashes; this occasions them to drop more regular and easy—like any kind of grain.—Some few soak their seed previous to rolling them; but this practice is not approved; it renders the seed too soft for rolling; and if dry weather succeeds the planting, they will vegetate badly.

"Formerly, high beds were preferred; now, we aim at planting as near a flat surface as possible. For this purpose, we throw up the two furrows forming the bed with a *single* dagon, and run shallow—then open the top (if not manured) as deep as we can with one horse and the plough-helve. If the soil could be placed in as good order for the reception of the seed without bedding, we should only run the furrow, as in planting corn, and then deposite the seed; but this, although practised by a few, is not approved by our best planters. The slight bedding, with the opening of the beds, leaves the soil in fine order, well pulverized, free of clods, and gives a good deep bed for the seed to vegetate in. If the piece has not been manured, a small worn out trowel-hoe with a coulter, may be used for opening the furrows, but without any mould boards. But the helve alone, if broad at the back, will open sufficiently wide. After dropping the seed, cover them with a board attached to the bottom of the plough helve.

"Various are the modes of covering;—with the feet; with weeding hoes; with a log pulled along the furrow, by its end, and with a log having handles and shafts, which drags across the bed, having notches to pass over the seed furrows, the horse walking between the beds, and the log covering two beds at the same time. Many other contrivances have been devised, a description of which is deemed unnecessary, as the one I am now about to recommend seems to have the preference, and to be gaining ground.—Take a piece of plank, about 2 inches thick, 2 1-2 feet long, and 9 or 10 inches wide, fasten this to the end of a plough-helve to stand at right angles with the beam of the plough, raise the front edge a few inches higher than the back edge; it will thus catch all the clods under it, and mash the most of them, a little light mould is drawn over the seed; the surface is left even and smooth, and a little pressed down. With this instrument the cotton will come up more regular, stand better, and keep longer free of grass, than in any other known mode of covering. This board is made, by some, long enough to cover two beds at a time: but, to cover as fast as a horse can walk, a single ridge is fast enough for me. You have no idea how smooth and handsome the land is in this way.

"Before I proceed further, it is necessary to say something of manuring. We have lately seen a communication from Brunswick, in the American Farmer, on the culture of cotton, which recommends the application of the manure *flushed*, and then left exposed, on the surface, to *evaporation*. This mode, my experience tells me, is entirely wrong; and when I was a school-boy, the theory then taught me was also at variance with it. I then learned that all animal and vegetable substances, in a state of decomposition, were volatile; and all volatile substances would lose their strength and diminish in quantity, if exposed to the air. Now, as all our manures are composed of animal and vegetable substances, can it be proper to expose to rapid evaporation, this manure, on a flat surface, scattered thin, to the whole action of a summer's sun?

"I have been a great advocate for manuring flush, taking care to cover it immediately after it is scattered, and have pursued that plan extensively; but time and experience have changed my opinion and practice. On small compact farms, particularly where land is dear, labour cheap, and manure plenty, I admit that this is the only proper mode of manuring. But, with us, where land is cheap and plenty, labour scarce and high, and the resources for manure very limited, and the supply nothing like equal to the demand, or quantity required; where the object should be to make the most of that labour and limited supply of manure, and where our light gravelly soil does not retain, permanently, any improvement we give it, it is our true policy to look to the *crop*, and not to the improvement of the soil, as a desideratum. I, therefore, prefer applying all my manure either for cotton or *corn, in the drill.* My practice is to flush my land, say for cotton: then lay off my ridges, scatter the manure in the furrow, cover it with single dagons; open the ridge with a plough helve placed sloping to the rear, so as not to drag up the manure; then plant, and cover with the board. If for corn, I flush as early as possible, lay off and deposite the manure as above, then bed up two furrows on each side of the manure with a double dagon; at planting time, open the top of the bed with a fluke plough, running shallow, without mould board, so as not to disturb the manure:—then plant, with a string, across the beds, and cover with hand hoes. The advantages of this mode of manuring are, that it will manure double the land, and produce upon this double surface the same result per acre that would be produced by flushing. None of the manure is *lost or injured* by evaporation: the whole remaining well covered, and without interruption, during the whole stage of the crop. The soil gets the benefit of *every particle* of the manure, and is more improved by it; that is, a ton of manure, thus applied, would make a greater improvement to land than the same ton would, if flushed. The crop, per cart load of manure, is greatly increased: the same manure will, if cotton is planted again on the same ridge, produce a better crop the second year than in that of its application: thereby getting two good crops of cotton from one manuring: at the same time, benefiting the land in the greatest possible degree; and, last, though not least, the farmer's purse is made heavier by it, than by the flushing mode.

"After planting your cotton, yonr next care is to keep it clear of grass, which you must carefully do from the onset; as grass is a destructive poison to young cotton; from which it can never recover, if it has been injured by it; particularly in its early stage. This crop should be ploughed frequently, never suffering a crust to remain long on the surface; nor should it be stirred whilst the soil is wet. In ploughing, be careful rather to add a little earth to the plants, than to take any from them. Our practice is to add a little to the bed at every working. It was formerly the custom to follow the plough, invariably, with the hand hoe—a very good practice, on a small scale; but where there is a full crop, it is impracticable: we chiefly depend on the plough to make our cotton crop, and the dagon, or other bar share is never used, after the bedding. Various contrivances have been tried to ridge down, weed, and work the cotton, with a view of expediting the work, and saving labour: one, called the skimmer, or knife, was a favourite instrument, a year or two back; it was attached to the right side of the plough helve, about three inches above the hoe, and stood nearly at right angles with the beam, but inclining a little to the front at its point, it was bent on the side something in the shape of a spoon handle at its back view. It would run as near the cotton as you pleased, just skimming the surface; and by running this skimmer once on each side of the cotton, the grass could easily be kept under; it saved much hoe work. The objections to it, are, that it cuts up too much cotton, without discovering it until several days after its use, that is, until the plants had time to die, that had been cut in twain under ground. It therefore required a skilful and trusty ploughman, *entirely* to be relied on, or the crop would be materially injured by having too many plants destroyed: an inevitable consequence of their being used by our negro ploughboys; and it did not pulverize the earth near the plants. It is now nearly out of use. We find that the favourite plough in this part of the country, so often mentioned in this letter, the old fluke hoe, is the very best instrument for cotton, as well as corn. The first ploughing, we break off the right wing of an old fluke hoe, and without mould boards, run as near the cotton as possible, without injuring it: running the broken wing next the cotton, to keep from cutting it up. This is done as soon as the plants are all well up, then chop out, with a hilling hoe, leaving from three to five plants at a station: and, immediately after, throw a little dirt around the standing plants, with hand hoes, so as to support them, and give them fresh loose mould to grow in. After they have recovered from this process, and begin to grow off finely, thin them with the hand, leaving only one stalk at a station, and as nearly nine inches apart, as the work can be done. After this, the crop is chiefly managed with the plough, only using the hand hoes about twice in chopping between and around the plants, where the plough could not destroy the grass; and the last time of working in completing the beds. If the fall should prove wet, and much grass springs up after the crop is 'laid by,' it is very beneficial to scarify, or slightly weed off the grass from the beds into the middle or water furrow, just before it goes to seed; this will prevent your next year's crop being grassy. Three hand hoeings, in all, are amply sufficient to make the crop: giving the plants a little dirt every working, whether with the plough or hoe—thus gradually raising the ridge. The old fashion was, to ridge down, with hand hoes, and let the crop remain in this state until it required working again. This practice of ridging down is exploded, and we are now as careful as possible, never to take any dirt from the plant without returning it immediately. We never expose the plant; and every working, increase the bed a little.

"When the season has been too wet to plough, and the crop gets grassy, wait until the ground gets in order to work, then skim the sides of the ridges with hand hoes, which cuts up all the young grass, and withdraws it with the dirt, from the cotton; but immediately return it with the plough and mould board. The dagon, we never use in our cotton; its mould board is too blunt; it also throws too much dirt. We commence as above described, with small flukes without mould boards, then add short mould boards, then gradually increase their length, and the size of the plough, every working running further from the cotton. The last two ploughings we use a very large plough hoe, from 12 to 15 inches across from wing to wing, with long crooked mould boards, running very shallow, once each side of the cotton, and then, with a similar plough, but wider mould boards, open the water furrows, making three furrows to the ridge. In this manner we leave the beds and water furrows handsomely formed—the former not high, and the latter not deep. I am an advocate for topping cotton, believing that it occasions it to branch and bole much better. Suckering is of great benefit to it, but that is out of the question, with a full crop. [*Norfolk Herald.*

CULTURE AND CURING OF TOBACCO.

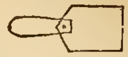
Locust Level, Frederick county, Md.,
May 10, 1825.

Mr. Skinner,

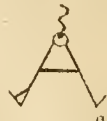
Sir,—The season for planting tobacco approaching, please publish the following in the Farmer:

First, presuming the planter has plenty of plants, would advise his planting without waiting for seasons. The hills fresh made in the forenoon, plant in the afternoon of same day, by watering his bed; make use of a fork in drawing the plants, to prevent breaking off the roots; as planted, bend the roots from south to north, and cover them, the south side with the fine soil, nearly over, which is quick done. They will live two, three or four weeks, without watering any way, and the first rain after will wash off the dirt, when the buds of the plants will appear white and fresh, though the outer leaves be gone; they will then thrive better, and come to maturity sooner than if planted in very wet seasons. Should no rain come in time to save them, you have only lost your time, and can re-plant. I would prefer planting with very light season, (though more tedious,) as the dry dirt will fill up the hole made for the plants and attach to the roots; if very wet, the ground bakes, and leaves the lower parts of the roots in a void. After planted, keep the ground clear of weeds, &c., and the tobacco of suckers and worms; put no hill to the plants, which injures the lower leaves, which are most valuable; don't top till its buttoned, (as called,) then not too high; otherwise you lose more by waiting for the upper leaves getting ripe than you gain, beside the time.

Tobacco, when ripe and fit to house, will have a yellowish appearance, feel thick and gummy. Fit for housing, weather clear and dry, set a careful hand or two, in the afternoon (when the tobacco don't break as easy as in the forenoon,) to split (as I never pegged any,) as much as you intend cutting next day, with a splitter, made out of an old saw or scythe, 6 to 8 inches long by 3 or 4 inches broad, with handle rivetted on thus:



Next day, dew off and dry, commence cutting, having carts or long sleds, and horses ready to convey the tobacco as soon as cut, to the house—the sun injures it if exposed; from the sleds put it on the sticks, not more than 4 or 5 plants on each, of 4 feet length, having two or more hands in the house (agreeable to your force,) to hang it up as sticked—having two horses, as they are termed, thus:



one at each end of a rope sufficiently long to pass over the beams or joists, when hanging; as one horse goes down, the other is coming up, which expedites the business—one horse will do, though much slower. One of the hands attends to hoisting, the other to placing the tobacco, giving it all a proper distance, not suffering the plants to press against each other; commence filling the roof—after that, over where your fires are intended, hang no tobacco; say on first joist or plate, leave the space of two sticks, widening the space on every joist or tier as you proceed down, so as to hang none over the fires or near enough on the sides for a blaze to reach, but may hang it down to nearly touch the floor on the sides: this opening will act as a chimney to convey the sparks and smoke upwards; leave 2 to 4 feet square, according to size of your house, open in each gable end, to emit the smoke and give in air; also have sufficient air holes below, which will prevent the tobacco sweating; put no scaffolds over your fires, as they prevent the heat ascending, and diffuse the smoke all through the tobacco—fully believing no house was ever burnt accidentally, except through the scaffolding; sparks will not set tobacco on fire, be it ever so dry. Dig two trenches, the length of your house, leaving the largest space in the centre, as the roof naturally tends to draw the heat to the middle of the house; these trenches ought to be about 3 feet wide and at least one deep, to prevent wood rolling, &c. As soon as your house is filled, which ought to be in one day, commence by making a number of small fires all along in each trench, with small wood—that which was grubbed off the ground is the best. These fires must be regularly attended by a careful hand, keeping the tobacco about milk warm, till it becomes of a goslin green—*i. e.* when it begins to change from green to yellow, when you will perceive the small ends of the leaves begin to curl—(as this is the most important point to know when to raise the fires, for should you raise your fires too soon, it will cure green, if too late, it will cure red,)—now is the time to raise your fires gradually and all alike, having your air holes all open, to prevent its sweating; continue raising, as the leaf cures first, which don't require half the heat of the stem, nor the stem as the stalks, which require such a heat that no human being could well remain in the house, longer than barely to put off his load of wood and retreat out; which last great heat must be kept up until you are confident the stalk is completely cured and dry as a chip—otherwise, if any sap should remain, it will communicate to the stem, then to the leaf, and turn it red or black. Here numbers of planters err, by letting out their fires too soon. At the last firing close your air holes below. Should you want to fill the same house again, soon after the last fires are sufficiently burnt down, take out all the embers, &c., pour a few buckets of water in each trench, and the next morning after firing you may take it down; re-stick, *i. e.* put the tobacco up, three, four or five sticks on one; which is quickly done, by placing the stick's ends to each other, and sliding it from one to the other; lay it now, as re-sticked, on your sleds—convey to the house you intend re-hanging it, (which every large planter ought to have,) there hang it as close as you can without injury, as the stem would break if pressed hard. When this house is filled, and the weather damp or rainy before you are ready for stripping, make small fires, to prevent its coming in order; for every time tobacco gets in order, and becomes dry again, it loses in weight and colour. When ready for stripping, replace as much as you wish to strip in one season by putting it thin on the ground tiers, which ought to be left vacant; at first stripping, fine tobacco ought to pass through four hands, making four sorts, viz: the 1st take off the trash; 2d, the fine or coloured, commonly called kitefoot, which ought to be of colour between white and yellow, clear of all other spots; 3d, the motley and red; lastly, the green, if any. When stripped, having previously provided your hogsheads, which ought to be tight and well seasoned; hand-pack it into them instead of bulking it, putting the upper head in tight, where it will go into a sweat, and probably become well qualified, without further trouble; must occasionally be examined, which is as easy and much more sure than if in bulk—for in the hogshead, if tight, it will all be alike, and by removing the head, may discover without disturbing but little of the tobacco; if found too warm, re-pack it into another hogshead—by passing it through the air, will prevent its progress to injury; and from the second hand-packing, you may repack it into hogsheads for market, without the old tedious process of bulking, sticking, hanging, &c., several times, thereby saving time, and your tobacco from being broke, and torn, and lost. If frost, or other circumstances should compel you to cut your tobacco when green, you can ripen it in the house by slow fires, as first directed, which may require from 5 to 10 or 12 days, agreeably to circumstances, till it becomes in the state as first mentioned, before raising your fires. If sufficiently ripe in the field when cut, you may generally raise the fires from 24 to 48 hours—then 48 hours after raising will be sufficient, making 96 hours altogether. As it was past time for sowing the seed, I omitted, in the beginning, saying any thing about it. But presuming now some young or new planters, might wish to know, I will merely state, without reference to the different names or kinds, that the kind of tobacco which has the most leaf in proportion to the stem and stalk, is the best for curing fine; and some kinds cannot be cured fine for the want of leaf in proportion, and the same kind may be improved by attention, in leaving such plants for seed—as all other species of seeds, grain or stock, by keeping the best for seed, &c.

I was a planter, or grower of tobacco, only three years. The first year my land was not suitable for raising fine tobacco, being principally old, as termed—though I fired it, and made some motley and good red. The second year I had all new ground and light soil, but partly failed, for want of plants and seasons; had to put half, or more of my ground, in turnips. The third and last, I had abundance of plants, new ground, and light soil. I planted the principal part without rains, as before stated. I had three tobacco houses, one very large, to re-hang, strip, pack, &c. in, which I first filled, and fired, and cured sixteen hours in the other two; filling each eight times.

From your friend and very humble servant.

JOHN HUGHES.

From the New England Farmer.

TICKS IN SHEEP.

It is a common thing for sheep to be infested with ticks, which frequently prove very troublesome to them, especially in the spring season of the year. But the pain and vexation which they cause the sheep, is not the only evil which they occasion; for the poor animals, when grievously annoyed by these obnoxious vermin, are, almost continually, combatting their assailants, but instead of overcoming the enemy or effecting any thing more than a momentary relief from their sufferings, they gradually pull out and waste their wool, and in this way diminish their fleece, to the no small loss of the owner.

As great an evil as this may seem to be, the remedy is both simple and easy. Boil a small quantity of tobacco, (perhaps what grows on one good thrifty stalk, would be enough for half a dozen sheep.) in so much water, as when it is sufficiently boiled, there shall be two or three gallons of liquor; let it become sufficiently cool; then open the wool along the centre of the neck and back of the sheep, and with a bunch of tow or some other spongy substance, put on the decoction until the skin becomes thoroughly moistened therewith—and in a short time the ticks will all be destroyed, and the sheep, instead of pulling out and wasting their wool, by fruitless exertions of self-defence, will become easy and contented, and suffer their fleece to remain to be taken off by the shearers.

For many years, I have taken this method with my sheep, just before the time of their lambing, and have always found it to have the desired effect. I very much dislike the foolish practice of chewing, snuffing and smoking the poisonous weed—at least no better reason can be given for so doing than fashion or force of habit—yet I annually raise a few plants for the benefit of my sheep, and would recommend to every one who keeps these useful animals, to do the same. A Yeoman.

RACING,

Recommendation of, as a means of improving the breed of horses—condemned.

Mr. Editor,

In your last paper, I read, with some degree of surprise, a recommendation of *racing* as a means of improving the breed of *horses.* What next? Shall we have *boxing* for the improvement of *men*, and *cock-fighting* for the improvement of *poultry?* To say the least of it, such a scheme does not appear to me to suit the columns of a paper devoted to agriculture, rural economy and the useful arts.

If the improvement desired is for useful (not gambling,) purposes, the means proposed are inadequate. Virginia has long been famous for her coursers—Do we find her breed improved? With the exception of a few good saddle and turf horses, her stock is bad. Pennsylvania and New Jersey never made any figure on the turf, yet are remarkable for good horses

I should be sorry to lose the blood of the English race-horse—it is valuable to intermix with that of less noble origin; but no judge will pretend that a *thorough-bred* horse is the proper nag for a farm. I grant that he works well; but he is hard to keep in good condition. He will travel as far in a day as a horse of any other blood; but he wants the proper *action* for the road. For the wagon, heavy horses are required: not a drop of racing blood is necessary in them. For the cart and plough, the Canadian breed, descended from the English cart horse, are excellent* For the saddle, a horse of mixed blood (half or three-fourths English, half or fourth country blood.) is best. Such a horse is fit for almost any use. Good coach horses are produced, by a cross of the race-horse, on a well formed Pennsylvania wagon mare. We have a great variety of breeds some of them very valuable, that require no further tests. From them, gentlemen may have horses of any *form* or *gait*, according to their particular fancies, without difficulty.

But, it will be asked, how are we, without contests on the turf, to ascertain the best horses? I reply, by *inspection* and the *performance* (not on the turf,) of their progeny. These contests do not afford infallible means of ascertaining superior merit. Much depends on keeping, training, riding—to say nothing of accidents, corruption, combinations, jockeying, &c. We have frequently seen horses, whose powers appeared to change with their owners: a single second may give the purse; but, surely, the horse who wins by that space of time, is not proved to be better than his competitor. Eclipse won the great race at New York—yet every Southerner believed *Henry* the best horse.

The most famous racers do not always produce the best colts. Instances will occur to every gentleman who has paid any attention to the subject.

Horse racing is attended with so many *evils*, that I should be sorry to see it revived. It has been gradually going out of fashion for twenty years; and is so completely so, at this time, that *ladies* are hardly ever seen on the course.

Your paper is calculated to be highly useful to the great body of the people, the farmers of the United States. Let them, their wives and children, remain at home. Do not, I beseech you, invite them to the *race course.* Teach us how to enrich our lands, and increase our domestic comforts; to improve our minds and our morals; and do not fear but we will find more innocent *amusements* than *horse racing*, and *those* that invariably *attend it*—and that we will breed *good horses*, although the art of racing should be lost. "*Do no evil that good may come.*"—"*Time is money.*"—Both time and money are valuable.—Let them not be *wasted* in the *training stable* and on the *race course.*

Maryland, May 5, 1825. A Farmer.

FROM THE FARMERS' JOURNAL—ENG.

ON DRAINING GRASS OR MEADOW LAND.

Sir, *Yorkshire, March* 17, 1825.

In reply to your correspondent A. B., of last week, relative to the expense of draining every furrow, if you think the following worth insertion, you will oblige a friend to agricultural improvement, (especially such as comes within the reach of small occupiers,) by giving the following a place in your paper.

With a common plough open the furrows, in the bottom and centre of which take out the earth from two to three inches wide and four to six deep, by cutting the sides with a common flat spade, and clearing the drain with a narrow tool made for the purpose, then simply returning the sod into its place. The soil which comes out is so trifling, and generally so tender, that after two or three frosty nights it will brush in and improve the surface.

I have tried this method, and wherever a fall can be got for the water at the outlet, find it to answer admirably, and the expense to be much less than that of common gripping. B. C.

N. B. With a simple implement, which might be made to cut both sides at once, and from nine to fifteen inches at a stroke, the expense might be still further reduced.

ON DRAINING.

Sir, *Hanslope, March* 18, 1825.

Considering it a sort of duty that each of your readers should contribute his mite of information on agricultural subjects, *pro bono publico*, when he has it in his power, I am induced to acquaint your correspondent A. B., in your last number, with the method of draining practised in Buckinghamshire, and the neighbouring counties, as it seems to me a great improvement upon the stone drains, inasmuch as it saves three-fourths of the expense, and will last, it is said, from twenty to thirty years,

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* Some will be for sale at the Cattle Show.

The drains are cut much in the same manner A. B. describes; only, instead of stone, old turf is used—and herein is the saving of expense. The turf is dug of the thickness of six inches, sloping on both sides, so as to be about four inches broad at top, and eight at bottom. It is laid in the drain with the green or top side downwards, being formed so as to fit the drain close as a wedge, leaving a space of about six inches under the turf for the drain water.

In furrow-draining, the rule is to make the drains 18 inches deep; *i. e.*, 6 inches below the turf, 6 inches for the turf, and 6 inches above the turf, which is to be covered with the earth taken out of the drain, so as to prevent the plough from catching and displacing the turf. The top of the drain is made ten inches wide, gradually sloping on both sides, so that the bottom may not exceed an inch or an inch and a half in width. The turf is generally cut about a foot long. The prices here are from 10d to 1s. the chain of 22 yards.

Draining every furrow is the universal practice in this quarter; and I have heard it asserted, that it has, in many instances, repaid the expense the first year. The turf must be a firm soil—a clayey soil is the best, for a soil of a loose texture is apt to break in. Hoping I have made myself intelligible to your correspondent,

I remain, sir, your well wisher,

A Small Farmer.

ON THE VALUE OF CLAY ASHES.

March 15, 1825.

Sir,

As your journal is ever open to the discussion of agricultural subjects, especially those calculated to promote its improvement, I beg leave to give you the result of an experiment tried by a friend of mine with clay ashes, as a manure. In the year 1822, he worked a piece of land containing six acres, and drilled it thirty inches asunder: he manured six drills alternately throughout the field, with rotten dung and clay ashes, at the rate of twenty loads of dung and forty-five loads of ashes per acre. It was sown with Swede and common turnips; both were an excellent crop. The parts manured with ashes were quite as good as the other. The crop was carted off, and the land sown with wheat, and seeded down the following spring; the wheat crop was equally good, and the seeds a very heavy one, especially where the ashes were put. The field is now sown with wheat, and those parts manured with the ashes, look more luxuriantly at present than the others which had been dunged. The expense of coal and labour to burn the ashes, amounted to a little less than five pence per cubic yard: coal cost eight shillings per ton, exclusive of hauling. Where coal cannot be obtained at a reasonable rate, turf, with a small portion of wood, will answer every purpose to burn the clay, except that it will cost a little more in manual labour. My friend has followed the system of burning clay for the last six years, and in no one instance has he ever failed of having a good crop from it. I am quite convinced, that were the system of burning clay or soil more practised, it would greatly increase the produce of the earth. Any further information may be had by directing a line, post paid, to A. B., Post-office, Penkridge, Staffordshire.

If you think this, Mr. Editor, worthy a place in your Journal, you are at liberty to insert it.

The land where this experiment was tried, is a very tenacious clay, and what is called poor land.

I remain yours, A. B.

AGRICULTURAL PROSPERITY OF ENGLAND.

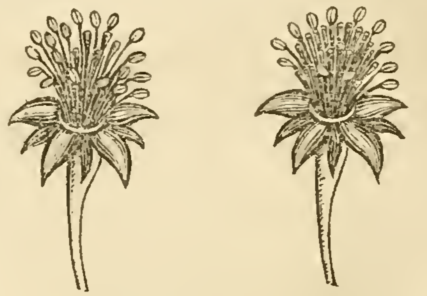
The Editor of the London Farmers' Journal, in a late number, remarks—"It is with great satisfaction we perceive that the amelioration in the condition of the farmers, and their labourers, is not local or partial; and if those who have bestowed so much pains to show the injustice with which the agricultural poor have been treated, have the opportunity of seeing this journal, and will take the trouble of turning over its pages, they will find their sympathy and their labours no longer necessary, for our county reports continue to testify the improving condition of country affairs; and if intermeddlers be not allowed to arrest the good in progress, a few years more may render the renovation complete.

MONEY PREMIUMS.

Sir,—I wish every success to the patriotic exertions of my brother farmers in Frederick county. Their cattle show, on the 26th and 27th inst. will be a good one; but, I had wished, for the honour of the state, that no society in *Maryland* would offer premiums in *money;* for I thought no Maryland farmer would accept of one in the shape of *sordid lucre.* Would not a man of true refinement sooner have some little trophy, however trifling in amount, that he might hand down from father to son, than *fifty dollars* in money?

It is a curious moral fact, that, in proportion as the labours of husbandry are performed by *slave* population, this sentiment of preference for *permanent* premiums, and indifference, if not contempt for *pecuniary* rewards as the prize of excellence, will be found to prevail. G.

HORTICULTURE.


MALE PLANT,
Male organs predominating.
FEMALE PLANT,
Female organs predominating.

STRAWBERRY BLOSSOMS,

Accompanying the communication of M , in last Farmer.

From the Long Island Patriot.

Mr. John Gage, of Union, a few years ago, grafted a pear upon an apple scion, in his garden. When it grew up, so as to bear, it bore, for two years, very excellent pears. The third and fourth year, its leaves, which formerly were those of a pear tree, changed by degrees, to those of an apple tree. The fifth year, and ever since, it has borne excellent apples. This has been related to me by at least fifty of the most respectable men on the spot, who personally knew it to be true, so that I have no doubt of its correctness. JOB JOHNSTON.

Preservation of Seeds.—The late Dr. Roxburgh, when in India, appears to have been in the habit of putting up the various seeds, which, among other things, he wished to send home to England, in an envelope of gum arabic; they were coated with a thick mucilage of gum, which hardened around them; and he was informed by Sir John Pringle, the president of the Royal Society, that the seeds had been received in a better state of preservation, particularly the mimosas, than he had ever seen the same kinds arrive from countries equally distant.

RURAL ECONOMY.

Timber and Fences—*how best economised.*

Dear Sir,—As I sat in my porch I could but remark the clouds of smoke issuing from the neighbouring farms, and the consequent destruction of timber, for the tobacco crop, the only crop that now rewards the farmer for his toil and labour; yet I could not but regret the loss of our forests, they are so rapidly disappearing. On my mind it produced this enquiry: what are we to do for rails, on our present system of farming? My farm consists of about 360 acres of arable land, divided in nine fields which are cultivated on this system, (in which I have greatly changed a poor farm to one of considerable productiveness,) viz. two fields in corn, three fields in wheat, (one a fallow,) and four fields in clover, two of which are for pasture and two for the scythe. To save timber, time, and labour, I am about to pursue a plan that I have been deliberating upon, and by which I think I can not only save labour, but bestow the labour on the land that the fencing now requires, which, with the cutting, mauling, hauling, and putting up, is considerable. It is simply this: divide the farm in four fields of 90 acres each, one in corn, one in wheat, and two in clover. I would divide a grass field each year, to afford two shifts for pasture, which would be sufficient until after harvest. This fence of convenience, as I shall term it, can be moved and put up in three days complete. I address my brother farmers, more to call their attention to this object, and with a hope of producing, perhaps, some better plan.

15*th March,* 1825. H.

PARSNIP WINE.

Newport, Isle of Wight, March 9, 1825.

Sir,

The following extract is taken from "Phillips's History of Cultivated Vegetables."

"Wine made from these roots, approaches nearer to the Malmsey of Madeira and the Canaries than any other wine; it is made with little expense or trouble, and only requires to be kept a few years, to make it as agreeable to the palate as it is wholesome to the body: yet fashion induces us to give pounds for foreign wines, when we can obtain excellent wines of our own country for as many shillings."

Being in the habit of making a variety of wines, and giving the subject much attention, I willingly bear testimony to the correctness of Mr. Phillips's statement. Parsnip wine surpasses the other home-made wines in the same ratio of excellence that East India Madeira is superior to Cape.

Under these circumstances, I ask leave, through the medium of your useful paper, to offer to the public specific directions for the manufacture of Parsnip wine: there not being, to my knowledge, one published receipt on the subject.

To every 4 lbs. of Parsnips, cleaned and quartered, put one gallon of water; boil them till they are quite tender; drain them through a sieve, but do not bruise them, as no remedy would clear the wine afterwards. Pour the liquor into a tub, and to each gallon add 3 lbs. of loaf sugar and half an ounce of crude tartar. When cooled to the temperature of 75 degrees, put in a little new yeast; let it stand four days in a warm room, then tun it.—The mixture should, if possible, be fermented in a temperature of 60 degrees. September and March are the best seasons for making the wine. When the fermentation has subsided, bung down the cask, and let the wine stand at least twelve months before bottling.

If great delicacy of flavour be not indispensable, moist sugar may be substituted for loaf, and some expense thereby avoided. But the wine may be made with good loaf, or crushed lump sugar, and not cost more than 7½d. a bottle!

I am, sir, yours, &c. L. S.

P. S. If some scientific person would favour the public with a chemical analysis of the Parsnip, it would facilitate future experiments in the manufacture of the wine; and from which experiments great improvements might reasonably be expected.

[*Farmers' Journal.*

INTERNAL IMPROVEMENTS.

RAIL-WAYS, CANALS, ROADS, &c.

No. 2.

Mankind have long observed the facility with which bodies may be transported on smooth, hard, level surfaces. Ice, combining these properties, is frequently used as an advantageous medium of conveyance. In the removal of excavated earth, a line of boards to facilitate the passage of the wheelbarrows, offers the most simple and primitive form of the rail-road, railway, or tram road, as it is variously named, and appears to have been used from a very remote period of antiquity. the obstacles from ruts, stones, and other inequalities being removed, much is effected by this simple contrivance.

Lord Guilford, in describing the collieries of Newcastle, in the year 1676, mentions the first parallel railway of which any description is on record.* It was entirely composed of wood, viz. large beams of timber, placed parallel at the distance of four feet, which space for the horse path is found to be sufficient. The next improvement consisted in plating the upper surface of these beams with iron, which not only contributed to their preservation, but diminished the friction. The carriage was of enormous size, and contained the whole load, the wheels revolving on the smooth surface of the wooden tracks, and the road to the river Tyne being on a declivity, a few horses easily dragged the car to the place of destination. In the year 1766, the first rails of cast iron were made; the length of each rail was three feet; the weight was enormous at first, as the load continued to be transported in one carriage: sleepers of wood were placed under the junction of each piece, a flat headed nail, in the form of a reversed cone, being driven flush into an aperture left for that purpose at the end of each rail, secured it in the proper position. A flange or barrier at right angles to the horizontal rail, cast on each bar, prevented the car from deviating from the road, and materially contributed to the strength of the railway; sometimes even an additional flange for the latter purpose was cast on the under surface of the iron, in the form of a segment of a circle, where it could be of no other possible utility. It was soon discovered that it would be more economical to subdivide the load among several cars, attached to each other by chains or ropes, allowing one ton only to be transported by each car. In consequence, the rails were reduced in size, preserving the original length of three feet, and the width of four inches, exclusive of the flange; one inch and a half in thickness was found amply sufficient to resist the diminished pressure; one wheel only of the car now resting on the rail at the same moment, it sustained the slight weight of one fourth of a ton only. The wheels of the cars encountering no obstacles (which on common roads renders wheels of large dimensions necessary,) are from ten to eighteen inches only in diameter.

The next improvement consisted in substituting small stone piers or props, instead of those wooden supports, which were very subject to decay; a hole drilled into the centre of this stone, admitted a wooden plug, into which the nail was driven as before: this pier is always inserted to a depth greater than the penetration of frost, and sufficient to insure a solid foundation.

Sometimes the railway-tracks are composed of convex or concave bars; the wheels of the cars, to which a corresponding curvature is given, prevents any deviation from the road; the flanges are consequently unnecessary: This form is more advantageous than the flat rail. The concave rail is, however, liable to this objection: water, soil and other obstacles are frequently retained in the cavity.

An attempt has been made to substitute a single bar of iron in place of the two tracks usually required. The weight is suspended from the bar, and the friction considerably diminished; but this plan has not succeeded in practice.

A very great improvement was effected in 1815, by Mr Jessup, the son-in law of the celebrated Mr. Smeaton: this renders all treatises on rail roads, prior to this period, of comparatively little value in estimating their use. He increased their utility forty or fifty per cent, by introducing a new form of rail. Rejecting the flat rail of four inches in width, he placed a wrought iron* bar, one inch and a half in thickness, edgeways, omitting the flange, for which a substitute was cast on the wheels of the car. The advantage of this alteration was a considerable diminution of friction, from the narrow surface to which the wheels were now applied; on this edge, sand, stones and other impediments will not remain. The rail was not as liable to break, and from this superior arrangement for strength, a smaller quantity of iron was sufficient. The rails could now be made of great length, thus avoiding the necessity of joints at every pier; a clamped joint, with rivets and washers, was used: this joint will not unscrew, or work loose. Common bar iron, of one inch and a half in thickness, three or four broad, and eight or twelve feet in length, supported, every three feet by props, was ascertained to be well adapted for this purpose without alteration. Allowance is always made for the alteration in length produced by the variation of temperature. This road was executed at Tindall Fell, in Cumberland.† The wheels are more subject to wear on this plan than on the flat rail, but do not injure the road to an equal extent: as they are more easily repaired than the rail tracks, this objection has, therefore, little force. On a flat and level railway, the performance of horses varies extremely, ranging from *four to eight tons, at the rate of four miles per hour.* On the edge railway, when level, from *seven to eleven tons* have been drawn with the above velocity.‡ On the level edge road of the Earl of Glasgow, a horse draws ten ton and a half at this rate.‖ In all these cases, the weight of the cars is included.

The majority of rail-roads at present in England and Wales, having been executed prior to the improvement of 1815, are of the flat cast iron species. In Scotland, the reverse prevails.

The dawn of an invention, which promises results far more important and beneficial than any heretofore attempted, first made its appearance near Newcastle, about the year 1798. A high pressure steam engine, drawing in its train numerous cars, was at that period in successful operation. Others were soon constructed in various parts of England; but for seven and twenty years many unsuccessful attempts were made to improve this cumbrous vehicle. Very recently, these efforts have been crowned with the most complete success in Great Britain. This prodigious power can now be obtained, in a great measure, divested of its unwieldy gravity, for a very slight expense. The benefit arising from the locomotive engine in England, has occasioned the remark, that a rail-road without locomotive engines, resembles a canal boat propelled by the agency of oars, unassisted by horses.*

It is confidently expected by many persons that the Gas Vacuum Engine, recently invented by Mr. Browne, will supersede even the steam engine, particularly on rail-roads; the great portability, safety and economy of this engine, would seem to authorize this expectation. It is stated that a *six horse power engine*, if supplied with portable gas, will *weigh only one hundred pounds;* and (in England,) be maintained at the same expense now required for two horses alone. Sanguine expectations of success are entertained, and the sum of 200,000*l.* vested for the purpose of testing it in practice.—Until the result of this experiment be accurately known, any calculations founded on this engine, will be, if not visionary, at least premature. *In Great Britain, rail-roads are more numerous than canals;* about 107 of the latter are at present finished, and nearly 200 of the former—the aggregate length of which exceeds 1500 miles: and several companies have recently been organized, four of whom alone propose additions, which, when completed, will almost equal 2,000 miles extra.† These speculations have excited great alarm to the holders

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[*] See Steveoson's Essay on Rail Roads.

[*] Sometimes cast iron is used in this form.

[†] See Jessup's Essay on Rail Roads.

[‡] The treatises published in England generally underrate the advantages of railways; this is in consequence of the railways being usually of the flat species: the majority of books on this subject, were written prior to the invention of the edge rail, and those in which the edge rail is mentioned, were written prior to the great improvements which have been discovered. The load of 11 tons, which was drawn four miles an hour on the improved and level edge railway, mentioned above, may be drawn on any other, constructed on the same principles. It has, therefore, been assumed as the standard.

[‖] This railway, composed of one set of tracks, cost only 660*l.* per mile. See the description by the engineer, in the Supplement to the Edinburg Encyclopædia. The bars, by an ingenious process, are, (although many feet in length,) wrought into a series of continuous segments of circles: the springing points are at the distance of every three feet, and are supported by piers—an admirable disposition for strength.

[*] The locomotive steam engine, is high pressure, with two cylinders; it requires no condenser: it re-acts by means of the revolving cog-wheel on the protuberances cast for the purpose, on the side of one or both of the rails; sometimes a third rail is cast for this purpose.—The weight of the engine is supported by the smooth wheels alone; the cog wheels only propel the weight. The wheels of the carriage traverse the smooth and parallel rails; no fly is required, as the momentum of the engine is substituted for this purpose. The number of cars which the engine is capable of drawing, varies, of course, with its power. An eight horse power is capable of drawing fifty of the cars in the plates—each car, including the load, weighing 1 ton. On a railway calculated for the locomotive engine, and which is made very strong to support the weight of the engine, (from 1 to 5 tons,) each car weighs from 3 to 4 tons. *A road of this description costs* 100 *to* 200 *per cent. more than is required when horse power, or the light gas engine is used.* It is probable that some recent improvements in diminishing the weight of the steam engine, may reduce this expense.

Many erroneous accounts, relative to the advantages of railways furnished with locomotive engines, or horses, have been republished in this country, from the English journals.

Many of the statements made are contrary to the elementary principles of philosophy. These accounts are to be distrusted, as they proceed from persons interested to deceive the public. Publications of an opposite tenor, containing innumerable falsehoods, have been published by canal proprietors, and others in Great Britain, whose interests will be injured by the adoption of the railway system. The journals, on both sides, teem with falsehood and error.

[†] A few of the contemplated rail-roads will be mentioned: the first is to extend from London to Edinburg, the distance about 400 miles; by the rail-road near 600; branches are to communicate with the several towns

of canal stocks, and a consequent depreciation of the shares has already occurred. One of the rival rail-roads will be constructed parallel to a great leading canal, and thus exhibit an excellent test of their comparative advantages. Rail-roads are almost unknown beyond the limits of Great Britain. On the continent of Europe, they are called, *par eminence,* the British roads. In the city of Milan, however, I observed that a considerable number of the streets were provided with granite ways; the species of stone used for this purpose, is the hard and compact red granite of the Laggo Maggiore, laid in masses of eight or ten feet in length, and one foot or eighteen inches in width and thickness. In the broad streets near the cathedral, four parallel roads are thus formed; the intervening space is paved in the usual manner.* In the United States no extensive railways exist; on some of our bridges in Pennsylvania, a rude railway or track for the wheels of carriages, is provided; the uniformity of motion thus produced, *occasioning no concussion,* ought to recommend their adoption, in a more improved form, on all similar wooden structures. Small railways of stone also exist in front of several of the houses containing fire engines in this city. A wooden rail track, which has proved very efficacious, is at present in operation, under the direction of that excellent engineer, Mr. Randell, for the purpose of removing the excavated earth of the Delaware and Chesapeake canal, below Philadelphia. A wooden railway, for the purpose of transporting ice from the bank of the river, where the depot was established, to the shipping in the Delaware, was introduced by our enterprizing citizen, Turner Camac, Esq. whose early, repeated and successful efforts to promote internal improvements, entitle him to our gratitude. A model of a railway several hundred feet in length has been made by Mr. Stephens, (the gentleman who recently applied for permission to construct a railway from Columbia to Philadelphia.) It is scarcely necessary to remark, that the launch of every large vessel, is an exhibition, on a large scale, of the prodigious effects resulting from a species of railway, viz. the ship's ways.

Additional improvements in railways may be confidently anticipated; perhaps the recent discoveries of Sir Humphrey Davy, may succeed in preventing the oxydation of iron, in the same manner as he has already succeeded with other metals. In this event, the great advantage that would result from polishing the surface of railways, is obvious. Another improvement may be effected with the cars. In Great Britain, they are made of prodigious strength, frequently weighing half a ton, the load composing the remaining half! The usual weight of the cars is one third of the whole. A common cart, weighing 700 weight, if strongly constructed, can easily transport three tons over a rough road, subjected to great and unequal strains and concussion; although this is much more than the usual load: on a rail-road the strain is always equal, and concussion never occurs. If, therefore, a common cart can transport a load about eight times its weight, how much easier could a railway cart support, perhaps, even ten times its weight?* Wooden wheels may be advantageously substituted for those of cast iron, now employed. Smaller axles, and, perhaps, friction wheels, will considerably diminish the friction. This diminution of weight in these vehicles, will add one third the effect of rail-roads. The heavy ring usually cast on the periphery of the wheels, used on edge railways, may be dispensed with; and a small metallic *pointer* attached to the body of the car, which will occasion comparatively less friction, will form an advantageous substitute. This pointer consists of a spike or a small iron axletree, which is perpendicular to the horizon and the main axletree—it is parallel to the wheels, and at the distance of three inches from them, at the lower extremity; it is bent at right angles, (in a horizontal direction,) and terminates in a point, which is in contact with the side of the edge rail; the elbow, or bend, may be omitted, and a small *horizontal wheel,* of seven inches in diameter, revolving on the side, instead of the pointer, will diminish the friction: both of these plans have been tried by the writer with models, and have perfectly succeeded.

Having now presented this historical sketch of rail-roads, it is proposed to explain some of their properties. Although on a level track a horse can transport eleven tons, four miles per hour;† or on a descent much more, if the angle be great; in some cases, the weight can be transported, not only without the assistance of a horse, but even draw up a weight by the power thus acquired—(this is effected in many districts in Great Britain,) *but in ascending, no road, or other contrivance,* can possibly enable a horse to elevate a greater weight *perpendicularly, than 120 pounds, at the rate of three miles an hour,* friction not being considered. By the agency of a pulley, (a machine with the minimum of friction) about 100 pounds, has been raised at this rate. Having before shown that *a horse can draw on an improved and level edge rail-road, eleven tons, four miles per hour,* which is *equivalent to nearly fourteen tons, at three miles per hour:* therefore, his horizontal draught is to his perpendicular draught, in efficiency, as 280 is to 1; viz. as fourteen tons to 100 weight.

Any angle in the road will alter the power of draught in proportion to the deviation of that angle from a horizontal line; and as the mere friction, independent of the power of gravitation, is the same at all angles; by the above data, the resistance, in any given case, may be easily ascertained; always observing in practice, that *if the angle be considerable, a horse will be unable to raise any weight, and sometimes cannot even raise himself*

By these data we ascertain (what is confirmed in practice,) that if the elevation in a mile of rail-road be equal to the two hundred and eightieth part of the length thereof, viz. nearly nineteen feet, it will require twice the power to elevate (on an inclined plane of this length and elevation,) the weight drawn on a level, by a given power, with the same velocity; or, the same power may draw half the weight with the same velocity; *or, the same weight with half the velocity.*

Hence on a road, with this angle uniformly ascending, it will require two horses to draw the fourteen tons three miles per hour.

Hills, whose angle of ascent is moderate, are not such serious obstacles in rail-roads, as many erroneously suppose: this is apparent from this well known law of gravitation, *that bodies gain in descending, exactly the power expended in their elevation;* hence a load which, on a level, requires two horses to transport it, will on an ascent of nine feet and an half per mile, require three; but after arriving at the summit, *the descent to the same level can be accomplished by one only:* equal in the total distance to two constantly employed to draw the same weight the same distance, and with the same velocity; or the velocity in ascending must be diminished, but in descending it will be increased in the same proportion; being equal on an average to the velocity obtained from the same power on a level. (See note 8, on the power of draught of horses at different velocities.) This, for very obvious reasons, does not obtain in practice; but the variation from the theory is extremely small, in favourable circumstances, on rail-roads. In other roads, the advantage in descending, by no means compensates for the fatigue in ascending.* How far it may be adviseable to deviate from a straight line in rail-roads to preserve a level, of course varies with several circumstances. On a level, the same moving power is sufficient for the whole distance, to communicate an uniform velocity. Where hills of great elevation and steepness prevail, the changing of horses occasions delay and extra expense; the level railway will be longer, but it can accommodate thereby a greater extent of country; but it will be more expensive. If the commerce transacted be merely sufficient to yield interest on the capital required for the shorter route, that should be adopted. If the trade be sufficiently great to defray the expense of the longer level route, as some labour will be saved thereby, it should have the preference. If the angle of ascent be inconsiderable, the shorter

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adjacent to the route. The proprietors are sanguine in their expectations that coal may be carried by land from Newcastle to London, cheaper than by the colliers plying on the coast. The capital of this company is stated to be 2,500,000*l.* The second is from London to Liverpool, by Birmingham—capital 2,000,000*l.* The third is from Birmingham to Liverpool and Bristol—the capital (1,500,000*l.*) was subscribed in Birmingham in six hours. The fourth is from Manchester to Liverpool—capital 400,000*l.*—distance nearly 33 miles. The expense required for these roads is much greater than for the roads previously described—and for these reasons: four sets of tracks are required—one for the going, and one for the returning trade; and two for the carriages conveying the mail and passengers, at a far more rapid rate than is convenient on the other tracks. The iron rails are much larger, and of course more expensive, than those usually employed—this is required to support the weight of the engine, (5 tons;) this additional expense may be stated, probably, at 100 to 200 per cent. Locomotive, and stationary steam engines, near inclined planes, are also included in these estimates; and in some few cases, even land for erecting warehouses for the use of the company. The late extraordinary increase in the price of iron in Great Britain, (amounting to 100 per cent. and occasioned by the great demand in consequence of the new rail-roads, as stated in a letter to a respectable mercantile house in this city, dated, Birmingham, Jan. 18, 1825,) explains the expensive estimates for these roads.

A rail-road is constructing near Edinburg, extending six miles, with an inclined plane, and a stationary twenty horse power engine, with four locomotive engines of six horse power each: the expense will amount to 24,000*l.* deducting the engines—equivalent to 3,200*l.* or about $13,400 per mile.

*In consequence of this excellent arrangement, the inhabitants escape that excruciating uproar, inflicted on us in such abundance in Philadelphia, by the passage of every cart. The facility with which one horse can transport the weight usually drawn by ten, the absence in a great measure of dust and mud, the greater duration of carriages of all descriptions, from the little wear and tear to which they are subject on these stone railways, (which are adapted to every species of vehicle,) ought forcibly to recommend the adoption of them to our city councils.

An improvement, in economically effecting this object, has actually been put in practice in Linlithgow, and other towns in the same district, in Scotland. It consists in placing stones, of ten inches cube, in the usual direction of the wheel tracks. *The expense is only six shillings a yard, or 528l. per mile, for two courses, composing one set.*—See Stevenson's Essay on Rail-Roads.

On a hill in Glasgow, where the difficulty of ascent was great, an iron railway for ordinary carts, was placed for the use of those ascending the hill; a weight can be drawn on this track up hill, with the same facility, as on the usual level stone pavement: this is a fact worthy of observation by the proprietors of hilly turnpikes—and of those towns where hills occur.—See Picture of Glasgow.

*This experiment has been tried with success, with a model, by the writer of this sketch.

† A weight much greater than this is reported to have been transported by the same power; but not having ascertained the accuracy of the experiments, it is not deemed advisable to insert them.—See the Report of the Engineer on the Railway of the Earl of Glasgow, in the Edin. Supplement; also, Stevenson's Essay.

*On a McAdams turnpike, the effect of power applied horizontally is to the same when applied perpendicularly, as 30 is to 1.

should be adopted. (It has not been found expedient in England, to adopt the shortest possible route in their railways.)

Having now explained some of the properties of a railway; it is intended to compare them with roads and canals, in reference to the division made in the beginning of this essay, viz. 1. Expense, 2. Expedition, 3. Safety, and 4. Certainty.

THE FARMER.

Baltimore, Friday, May 20, 1825.

FREDERICK CATTLE SHOW.

The Frederick County Agricultural Society will hold their cattle show, fair, and exhibition of domestic manufactures, &c. at the Monocacy Bridge Hotel, three miles east of Frederick, on the Baltimore turnpike road, on Thursday and Friday, the 26th and 27th May, 1825.

PREMIUMS—*in current money.*

HORSES.

For the best stallion calculated to improve the breed of draught horses, ...	$10
Best do. quick draught, ...	10
Best do. saddle do.	10

MARES.

For the best brood mare for slow draught, . .	5
Best do. for saddle and quick draught, . .	5

No mare can receive a premium unless she has had a colt.

BULLS.

For the best bull over two years old, of any breed, ...	10
Second best do.	8

COWS.

For the best milk cow, of three years old and upwards, ...	5
Second best do.	3
For the best heifer, of one year old and under three, ...	5

OXEN.

For the best pair of well broke oxen, . . .	5

HOGS.

For the best boar over one year old, ...	5
Best breeding sow, ...	5

SHEEP.

For the best Merino ram, of one year old or upwards, ...	5
For the best ram of any other breed, . . .	5

The rams to be shorn on the ground, or satisfactory certificates of the fleece produced to the judges.

For the best pair Merino ewes, ...	3
Best do. of any other breed, ...	3

PLOUGHS.

For the best three horse plough, from any county, ...	5
Best two horse do.	5

PLOUGHING MATCH.

For the best three horse plough which does the work assigned it, in the least time, best manner, and most ease to man and beast, . .	5
The best two horse do	5

DOMESTIC MANUFACTURES.

Best piece of broadcloth, manufactured in the county, not less than ten yards, ...	5
Best piece of cassinet, do. twelve yards, . .	3
Best piece of carpeting, do. not less than twenty yards, ...	5
Best pair of blankets, ...	3
Best pair of diaper table cloths, ...	2

Volunteer Premiums, by Ladies of the First District.

For the best straw or grass bonnet, plate, the value of	$12
Best down bonnet, do. do.	6
Best willow work basket, ...	2
Second best do.	1

Persons having any fine article of domestic manufacture, of any adjoining county, are invited to present them for exhibition.

Ordered, That all subscriptions for the current year be paid on the first morning of the show, and any persons determined to withdraw from the society will signify it to the secretary, and pay their respective arrearages to the treasurer.

JOHN M'PHERSON, *Pres't.*

There will be ample time for the premium stock, domestic manufactures, &c. to come down from Frederick, and enter the lists, at the Maryland tavern on the 1st June. Their having taken the premium at Frederick will be, of itself, strong proof of their superiority, and give them a good chance of success at our show.

Last Meeting of the Trustees of the Maryland Agricultural Society, before the Cattle Show.

The Trustees of the Maryland Agricultural Society had a full meeting at Dalton, on Thursday the 12th inst. On examination of Dr. Thomas's wheat, it was found to be much infested with the hessian fly, even the white flint wheat was far from being exempt from this destructive pest. The whole neighbouring country was suffering for rain.

Some samples of beautiful corn were exhibited to the Board, by H. V. Somerville, Esq., brought by him from the shores of the Mississippi—one, as white as milk; the other, a very long grained, genuine and early gourd seed corn. These were distributed, for experiment, among the members of the Board.

The Board adjourned to hold their next meeting at the Maryland tavern, at eleven o'clock, on Saturday the 28th of May, to make final preparations for the cattle show. It is highly necessary that this meeting should be full, in number, and punctual, as to time, and each member of the Board will do well to make, in the mean time, memoranda as to any thing which may occur to him as necessary to be discussed and regulated on that day.

It would appear by the letters received by the corresponding secretary of the Maryland Agricultural Society, that the change in the time of holding the society's exhibitions, has been favourably received. Of the number of gentlemen appointed judges, almost all have accepted; and it is understood, that distinguished agriculturits will be in attendance, from Virginia, Pennsylvania, Delaware, New York, and even from Connecticut. The purchase of improved domestic animals, is, no doubt, the object of many of them.

The Hessian Fly.—This destructive insect is making its accustomed ravages upon the hopes and the labours of our farmers. It is said to be unusually injurious this season—whole fields are laid waste and irrecoverably gone. It is supposed, that in light lands, the ruin is complete, and a great deal of other lands is severely afflicted. Three weeks ago the crop was prosperous, but now the prospect is sadly changed. The improvement of lands by manure is the only hope, and yet in some well dressed grounds the crop will fail this year, owing to the ravages of the fly.

The above account, from the Easton Gazette, is confirmed by our own observation. On Elkridge, last Thursday, the wheat was obviously much affected by the fly, and nothing but a warm rain could save it from very extensive depredations. The clover was in a fair way too, to be ruined for want of rain.

More Splendid Horses, for exhibition and sale at the cattle show, at the Maryland tavern, four miles from Baltimore, on the first of June.

It is expected, that besides many other splendid horses which, it is known, will be on the ground, we shall be favoured with the view of Mr. Lufborough's horse Rob Roy, bred by the Hon. John Randolph, and the celebrated imported hunter stallion Emperor, said to be one of the finest horses ever brought to this country. Zembuca, a colt of great promise, property of Mr. W. Wright, will also be for exhibition and sale. This is said to be one of the finest colts ever bred in Maryland; one year old; got by Silver Heels, out of Aurora; she was got by Vingt-un. He is of iron grey colour, of great size, and fine figure, and his blood, on both sides, of the best stocks.

Bakewell Sheep.—We understand, that Mr. Barney, the enterprising grazier, of Delaware, will have for sale, at the Maryland Cattle Show, on the first day of June, a few of his best Bakewell Sheep.

We are of opinion, that a few of the broad tail, crossed on the Bakewell or Merino stock, would bring good prices.

The Union Steam Boat Line Company between this and Philadelphia, with their usual liberality, have, we are informed, offered to bring and carry back fine stock, gratis, for exhibition at the Cattle Show.

COMMERCIAL RECORD.

SUMMARY OF FOREIGN PRICES.

[Our extracts are taken generally from the New York American.]

Liverpool Markets, April 16, 1825.

The wind having changed at the commencement of the week, we had large arrivals of Cotton, which caused a suspension of demand; but on Thursday we experienced a revival, and the transactions became very extensive—the total sales amount to about 31,900 bags.

The business in Ashes has been small; 285 bbls. of Canada Pot have been sold at 32s. 6d. a 33s. per cwt.; 20 barrels of Pearl, at 37s. 9d. a 38s.; 10 bbls. Boston Pot, at 41s.; 30 bbls. New York, at 39s. 6d., and a few barrels of Pearl at 40s. Nothing done in Tar.—100 bbls. inferior Turpentine sold at 10s. 3d. per cwt.; 320 of middling, at 12s. 3d.; and 300, three-fourths soft, at 13s. The sales of Tobacco are about 100 hhds. of Virginia and Kentucky leaf, the former description for home consumption, and the latter for foreign export. There was a better demand for Grain at Tuesday's market, which has sinoe continued. No alteration in American Flour.

A postscript to a letter of the 16th says, "the same animated demand for Cotton, continues to-day, and notwithstanding the wind is strong from the west, our imports are light; that is, for the last two days. This gives increased confidence, and *ten thousand* bags more have been sold to-day at $\frac{1}{4}$ to $\frac{1}{2}$ advance."

From a monthly circular of the 4th April, we have compiled the following facts relative to Cotton:

Stocks in Great Britain, 1st Jan. 1825.

Of American,	64,000 bags,	against 1 Jan. 1824,	199,600
All other sorts	171,500 do.	do. do. do.	182,630
	235,500		382,230

Decrease in the stock from exports and consumption, allowing for quantity imported, 1st March, 24870 bags. The imports into Liverpool for the first three months of 1825, were, of American 69,840; for the same period in 1824, 84,380—imports in March, 1825, of American, 38,020—in March, 1824, 41,330.

Prices 4th April, 1825, Boweds, 13$\frac{3}{4}$ a 16$\frac{3}{4}$d.
4th April, 1824, do. 7$\frac{3}{4}$ a 9$\frac{1}{4}$d.

The sales from 4th March to 4th April, were, of American cotton 80,700 bags—other sorts 86,200 bags—total 166,900; of which the speculators are estimated to have taken 109,000 bags.

The total sales in Liverpool during the first 13 weeks in 1825, were about 327,000 bags against the sales for the same period of 1824 of 160,000 only—184,600 of these were taken on speculation, against 13 000 last year. So that, it is calculated, notwithstanding larger sales, that manufacturers have actually lighter stocks on hand From these, and similar data, it is calculated by the writer of the circular, that prices would be maintained, particularly, as trade was brisk at Manchester, and the consumption, great as at present it is, likely to increase.

Wheat.—One lot of Lawler and other wheat, mixed, belonging to W. R. Durding, of Kent county, sold for $1.15 per bushel; one lot of Lawler, made by R. S. Gamble, of Kent county, was sold for $1.12 per bushel.

Tobacco.—Inspections in the city of Baltimore during the week:

At Warehouse No. 1, ...	600 hhds.
At Warehouse No. 2, ...	400
Total, ...	1,000

MILL BROOK—FOR SALE.

That most desirable seat and tract of Land, lying in Halifax county, North Carolina, on Big Fishing creek, 3 or 4 miles below the intersection of Little Fishing creek and Big Fishing creek, and about 30 miles above Tarborough—the same distance below Warrenton and Louisburg, 20 from the town of Halifax and 60 miles from Raleigh—containing 2,000 acres of Land, all adjoining, and the greater part well adapted for corn, cotton, tobacco, &c. Mill Brook has a never-failing stream and an extensive Mill House, with four pair of grists in a breast—one pair French burrs, one pair Cologne, and two pair Sopus; bolting screen and fan; one corn crusher; two cotton gins; 50 and 54 saws; one saw mill—all under one roof. A tumbling dam nearly 100 yards long, with a pen of hewn timber, tithed across and filled in with rock, spoiled and sheeted, forming a tumbling dam perfectly safe in all freshets, having a permanent rock foundation. Within the distance of about 200 yards north of the mill, is an elegant situation, high and dry, with a very spacious two story Dwelling House, (built in a modern and tasty style,) and all other necessary out-houses—a first rate well and spring of water attached thereto, with the additional advantage of many fine springs on the premises. It is, no doubt, a very healthy place, from experience of 24 years ownership and residence thereon—which renders it, in every respect, truly valuable, and justly merits the attention of any gentleman or capitalist who might feel a wish to erect various manufactories, &c.—as for instance, carding and spinning works, weaving, &c.—and many others, to favour an adventurer; who, on such an occasion, might find it greatly to his interest to view the premises, and judge for himself; and who, I venture to assert, cannot fail of being pleased, as it is truly a romantic situation. Mill Brook will be sold low for cash, as the improvements cost me half the amount I might be disposed to take for the whole; or I would take part, or all, in Negroes, if the terms could be agreed on. Should I not sell at private sale, on or before the 4th of August next, it will on that day, be set up by me, at my house, to the highest bidder, at which time further particulars will be made known. All my stock, horses, cattle, sheep and hogs, corn and fodder—household and kitchen furniture, and farming utensils, will be disposed of at private, or at public sale, on the day above named, if fair; and if not, the next fair day, and to continue from day to day, until all may be sold. As I wish to move to the Western country, I would give immediate possession, with or without the advantage of the then standing crop of 200 acres, or more—and the better half in cotton, the other in corn and potatoes.

April 28. ISAAC HILLIARD.

DAVIS'S PATENT PLOUGHS, &c.

Removal.—The subscriber would inform the public that he has removed his manufacturing establishment from the head of Market-street to No. 36, Pratt-street, between Charles and Hanover-streets—where he will keep constantly on hand, for sale. his patent *Cylindrick Straw Cutter*, at the following prices, viz: The smaller sizes, with a permanent bottom (but self-feeder,) at $45; the same size, with a revolving bottom. $50 extra knives. $5 a pair. His second size, with a revolving bottom, $55—extra knives $6 a pair; his largest size, with two balance wheels, one on each side, $85—extra knives $10 a pair: these last machines are capable of cutting from 150 to 300 bushels per hour. He has also on hand, and will constantly keep for sale, *Brown's Vertical Spinner, for spinning wool.* These machines run six spindles at the same time, and with much less labour than a common one-spindle wheel, and do from three to five times as much work in a given time, and do it better, and more evenly, than it can be done in any other way. The art of using them is also very readily acquired, and they occupy only about one-third of the room of a common wheel—price $25. He would likewise inform the public, that he is just commencing the manufacturing of *Gideon Davis's highly improved Patent Ploughs.* These Ploughs have recently been tested with five others of the most celebrated ploughs in this country, by the engineer department at Washington—their report published (from under the hand of the hon. John C. Calhoun, Esq., late secretary of war,) in No. 50, 6th vol. of the American Farmer, copies of which can be had by calling at my shop in Pratt-street.

These Ploughs, besides making the almost incredible saving of 40 per cent in draft, are so simple in their construction, that they may be repaired on any farm, without the assistance of a mechanic.

The subscriber being the only agent that Mr. Davis has in this city, confidently expects a liberal patronage from the public.

All communications (post paid,) will meet with due attention; and orders, enclosing the money, promptly executed JONATHAN S. EASTMAN.

Wanted immediately—A quantity of good Plough Timber, for which a part cash will be given, and the balance in work, as above. Also, a first rate blacksmith, of sober habits and good recommendation, acquainted with edge tool work, would find good employment, by making immediate application as above. J. S. E.

THE BEAUTIFUL THOROUGH-BRED HORSE

ROB ROY,

Will be let to mares this season at my Mill Farm, in Montgomery county, about 4 miles above Georgetown, and about 1½ miles above Tenallytown, on the river road, at the price of $15 the season for each mare, but which may be discharged by $10, if paid by the first day of October next—$20 to insure a foal—$5 cash, the single leap—and fifty cents in each case to the groom.

Rob Roy is of a dark chestnut colour, full 15½ hands high; and in point of blood, symmetry of form, and elegance of figure and action, is not, it is believed, surpassed by any horse in this country. He was bred by the hon. John Randolph, of Roanoke, Virginia, and from his best stock, as will be seen by the following pedigree:

Rob Roy was got by Mr. Randolph's thorough-bred horse Gracchus; his dam (the imported mare lady Bunbury,) by Trumpator, out of Theopha, by Highflyer; Plaything, by Matchem; Vixen, by Regulus, &c.

Gracchus was got by the celebrated imported horse Diomed; his dam Cornelia, by Chanticleer; Vanity, by Celer; Mark Anthony; Jolly Roger, &c.

Rob Roy is an aged horse; but has never been broke or covered a mare.

Good pasturage will be provided, at 50 cents each. per week, for mares coming a considerable distance—and they will also be fed on grain, if required, at the market price. Care will be taken of all such; but there will be no liability fur accidents or escapes in any case.

Grain of all kinds, delivered at my mill, will be received in payment at the market price.

The season will commence on the first of April, and end on the 20th July, next.

NATHAN LUFBOROUGH.

P. S. Rob Roy will have a stand, on Monday, Tuesday, and Wednesday, on the plantation of George Semmes, Esq., of Prince George's county, near Potomac river, and a small distance below Alexandria.

May 20, 1825. N. L.

FOR SALE.

A fine half-blood Devon Bull, for sale at the Cattle Show, the first of next month, by JOHN GIBSON,

Manager at Oakland Farm, Falls Turnpike.

CONTENTS OF THIS NUMBER.

On Cotton—Culture and curing of Tobacco—Ticks in Sheep—Racing, as a means of improving the breed of Horses, condemned—On Draining Grass or Meadow Land—On Draining—On the value of Clay Ashes—Agricultural Prosperity of England—Money Premiums condemned—Strawberry Blossoms, male and female—Apple and Pear tree—Preservation of Seed—Timber and Fences, how best economized—Parsnip Wine—Railways, Canals, Roads, &c., No. 2—Frederick Cattle Shows—Maryland Agricultural Society—Editorial—Commercial—Advertisements—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	7	9		
COFFEE, W.I. Green, .	—	17	21	20	25
do. Common,	—	16	17	18	20
COTTON, Louisiana, &c.	—	22	26		
Georgia Upland, . . .	—	22	24		
COTTON YARN, No. 10.	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	11	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32	33		
FISH, Herrings, Sus. new	bbl.	2 18		2 25	
Shad, trimmed, new,	—	6	6 50	7 00	
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	5 25			
Fine, ...	—	4 75			
Susquehanna, superfi.	—			none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	43	44		
Wheat, White, ...	—	1 10	1 17		
do. Red, ...	—	1 05	1 10		
Buckwheat, ...	—	55	75		
Rye, ...	—	37	40		
Barley, ...	—	50			
Clover Seed, ...	—	3	3 25	3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	9			
LEATHER, Soal, best,	—	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 50		1 75	
Pitch, ...	—	1 50	1 75	2	
Turpentine, Soft, . .	—	3			
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	35	50		
RICE, fresh, ...	c.lb.	3 50	4		
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	26		37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—	28	30		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	10 25			
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled,	—	30	35		

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AGRICULTURE.

SHEEP.

Mr. Editor,

I commence a series of papers on Sheep, by sending you notes and remarks touching certain facts relative to American sheep, &c. You will perceive that the remarks were calculated for the meridian of fifteen years ago, but will be found very generally applicable to the subject, in the present times. In my next, I will send you details of the sheep exhibited at the various Arlington sheep shearings, their origin and properties—and also of the aboriginals of Smith's island, improved by the hand of nature.

At this moment of flattering and happy prospects for the domestic interests of our country, I cannot but recur with pleasure to the recollection of humble services, devoted more than twenty years ago, to the then thought sceptical, now prosperous cause, of national industry and independence—and truly do I rejoice; to have lived to witness the time when the declarations made in that distant day, have been fulfilled—and

"America will become great and free in ministering to her wants, by the employment of her own resources, and the American citizen proudly appear, when clothed in the product of his native soil." Esto perpetua.

Very truly, yours,

GEORGE W. P. CUSTIS.

Arlington House, 14*th May*.

NOTES AND REMARKS ON THE SUMMARY OF FACTS

Relative to American Sheep—by a Farmer of Pennsylvania.

Transmitted to the English Board of Agriculture, by General Washington, in 1794, by Mr. Custis, of Arlington—and first published in 1810.

The *Persian Sheep* were imported direct from the East Indies, and a Ram and Ewe presented to Gen. Washington, either by Col. O'Donnel, or Mr. Barry. At the sale of the General's stock in 1802, Mr. Custis purchased the imported ram for the sum of ten pounds—a sum in those days deemed the effect of enthusiasm or folly. In these days *eleven hundred and fifty dollars* have been given for a ram, and the same been deemed the result of wisdom and patriotism.

The imported Persian had tupped at Mount Vernon, but a short time previous to his sale, but his get had wonderfully improved the form and greatly increased the length of staple in the Mount Vernon flocks—and although the mutton at that hospitable board was always much esteemed, its delicacy and flavour was greatly increased by the Persian admixture.

The Persian are a sheep of fine constitution, and possess the admirable requisites of short legs and round bodies; and although the wool is harsh in fibre, it forms an excellent foundation for long woolled stock. The Arlington long woolled, founded on this race, have had their staple much meliorated by the introduction of finer woolled crosses, and the length at the same time retained in sufficient degree. The very superior flocks of Mr. Foote, and Mr. Meade,* of Frederick, bred from the Arlington long woolled, still trace their origin to the imported Persian, although the latter flock received an essential benefit from the *improved* or Bakewell† cross upon the long woolled.

The general race of sheep in the Southern country, previous to the introduction of the Persian, were remarkable for a short, knotty, and cotton-like appearance of wool, hardly enough to keep the animal itself comfortable, and hardly any to spare to the farmer's use in any season. The Persian greatly increased the length of staple—gave a very superior form to this degenerate race. The flocks upon the estate of Mr. Custis, in New Kent, were of the old race of the country, as just remarked, till 1806, wool 2 or 3 inches long, and sparingly scattered upon a very spare and gaunt frame; since this period the flocks have become a fine long woolled race, and much admired both for wool and appearance.

The imported Persian ewe died a few years since at Arlington. A thorough bred ram was sent from Arlington to the estate of George Calvert, Esq., of Riversdale, near Bladensburg, and was the only one bred from the imported stock. Mr. Calvert sheared a very fine lamb, of the long woolled race, a year since, probably derived from his Persian. It is presumed that some of the Persian race are still existing about the estate of Col. O'Donnel, near Baltimore; and if so, they are well worth the attention of long wool breeders.

The average weight of sheep, to the South, is very similar—from 40 to 60 lbs. nett—100 is a very large mutton, south of the Susquehanna, although, in a few instances, they have been found of still greater weights. Smith's island wethers are quoted at 60 lbs. nett. These sheep being children of our soil and clime, may be considered as a fair average for the best pastures of the South.

The price of sheep in Virginia, may be rated at from 1 to $2 per head for lambs—from 2 to $3 for grown sheep when poor—and from 3 to $5 for fat wethers, according to the season. The price of rams, of the country breeds, previous to 1802, was from 3 to $5. The Persian was, perhaps, the highest priced ram sold from the revolution up to 1802.

The Mutton of this country.—The mutton of Virginia has always been deemed excellent. The best mutton has, however, been derived from the sheep of *Curracoa*, imported many years since, and generally extended. The tail of these animals is esteemed a great delicacy, although by no means so large as that of the *Barbary* race. The Curracoa are all coarse woolled, though very thrifty in feeding, and fatten at an early age. General Washington received as a present, from a Mr. Athol, of Antigua, some West India sheep, perfectly hairy, and much resembling deer, but delicious as mutton. These tropical strangers soon lost their hair, which softened into wool, as a protection from the inclemency of a colder climate. From the facts of coarse woolled sheep always producing the best mutton, at all ages and in all countries, it may fairly be supposed, that Merinos will fail in these respects; but if the Merinos are not so well suited to the interior, they are certainly amply provided with every requisite for the exterior economy of our citizens.

The heaviest Fleece.—The fleece of Bakewell, the first premium lamb at the Arlington sheep shearing in 1805, weighed 12 lbs. 5 oz. clean wool. In answer to certain queries proposed to the agent at Smith's island, and others conversant therewith, 13 lbs. is reported as the greatest fleece; but as the Smith's island sheep have generally a good deal of sand in their fleeces, Bakewell's fleece may be considered as superior. Mr. Foote's Badger, a lamb of Mr. Peter's, one of Mr. Calvert's, all of the Arlington long woolled, averaged 10 lbs.—5 lbs. of clean wool is nevertheless an ample, and indeed a great average fleece for American flocks.

The price of Wool.—The price varies: wool to the South is generally sold in the dirt from one to three shillings per pound. Thirty cents ought to be deemed an average value for unwashed. We should hope that this slovenly practice of selling wool and filth together, will now give place to a more desirable system. Three pounds of clean washed, to a fleece, appears a fair average. It is certainly enough for the South.

We have Wool as fine.—That we have some wool, and native wool, as fine as that of England in general, no doubt exists; but this is very partially found in our wide extended territory. Inattention, and the promiscuous intercourse of flocks, have greatly mixed the fine wool with the coarse; yet in most flocks some fine woolled samples are to be met with. The Smith's island is fine—probably fine wool was first placed there, and there it still remains, in a long extended line, from generation to generation again—for the island has received no race from abroad. Most American sheep have three distinct wools upon the same carcass—the neck and shoulder fine, the body good, and the hips and thighs coarse. English sheep are more uniform in the quality of their wools.

Few sheep keep their prime longer than 7 years.—Four years, or the full mouth, may be considered as the ripest age for sheep. Ewes generally fail in milk after this period, and wethers do not fatten so well when their teeth begin to wear. Six years would be a safe age to prune a flock at, when ewes and wethers should both be prepared for the knife. It is essential, in raising improved sheep, to examine the ewes frequently, to ascertain whether they be good nurses, since many ewes, to appearance well looking, are but indifferent milkers.

It is rare for a Ewe to lamb twice a year.—It is rare, but sometimes happens. I have known ewes to yean at almost all seasons. Young ewes, which have been kept from ram for a length of time, will sometimes receive him at extra seasons, and produce accordingly. It very seldom occurs, except with young ewes.

Premiums given by government.—Some of the state governments have already adopted this measure.

A perfect breed of domestic animals.—Our breeds of domestic animals are sufficiently perfect for their various uses—sheep excepted. Horses have arrived at a peculiar degree of perfection, and importations from England have, within a few years, been immense. For useful purposes, we want no more—yet it is truly a matter of regret, to see how few of these imported animals have conduced to the benefit of rural employments. Few of the stock of Highflyer, or Eclipse, have descended from their dignity so far as to minister to the duties of agriculture. The patient animal which draws the plough, is a better servant to the Republic, than the gallant courser who wins the race. That blooded horses have their merits, is most true; but unfortunately, these merits are much obscured by being more devoted to the pursuits of pleasure, than the practice of industry. The wealthy and careless may indulge in the delights of the turf; but they should remember, that the enjoyment of their favourite pleasures, gives nothing to virtue and industry, but is rather an encouragement to idleness and vice.

As to the food.—The food proper for sheep is to be found in all lands, very rich and very wet ones excepted. Rank grass purges, and wet grass rots sheep. The grass of hills is most preferable.—Old lands, which have put up white clover, are particularly healthful for this delicate animal, but to all pastures, whether high or low, some portion of wood should be attached. This in summer serves as a protection from the meridian heat, and in the winter screens them from driving snows. In spring, sheep should be driven to woods, where they browse upon the young twigs and buds, which operates as an aperient medicine after the long feeding on dry provender.

Sheep should not be kept in close sheds.—Nothing injures sheep more than confinement. They seem by nature free, and are so domestic as to need little control. The close mephitic atmosphere, generated in hot stables, is highly injurious to the tender organs of sheep; and although a shelter is useful in wet freezing weather, its only use is to keep their beds dry—for their bodies feel harm only from lying on wet ground, and not from falling weather.

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* R. K. Meade, Esq., of Frederick, produced, to the surprise of Dr. Logan and other eminent agriculturists of Pennsylvania, a sample of the Arlington long woolled bred in Frederick, measuring sixteen inches in length.

† The name of the first premium ram of 1805.

The most common diseases.—The diseases of England and America are very similar, and often proceed from the same causes, although the climate is naturally different. The scower generally attacks in the spring, and often proceeds from eating young clover. When it appears at this season, it is generally cured by shearing the animal, which giving a free vent to perspiration, checks and ultimately conquers the disease. When at other seasons, dry meal and salt, is, perhaps, the best medicine, and high short pastures the best regimen.

The running at the nose.—I can by no means agree with the Pennsylvania farmer, as it respects this disease. My experience has shewn me, that a running at the nose is liable to all ages, and conditions of sheep, and is generated by damp foul weather, want of salt, and crowded folds. I have known it to occur and disappear within a few days. I have no idea of its being a concomitant of the rot, but rather think it an influenza, liable to be generated and removed by the state of the atmosphere.

The rot—I consider as a local disease almost entirely confined to the liver of the animal, and in no wise contagious. Parkinson, in his Practical Farmer, gives a minute and satisfactory explanation of this formidable disease, from actual experiment.—It is certain that the rot always proceeds from feeding in moist places, where animalcule are generated, and thence imbibed by the sheep. A sheep dying of rot, will always be found to have a morbid liver, and by use of glasses, small flowkes or insects, will be perceived therein. The rot never originates in frozen weather, because such insects could not then exist. The rot when taken, admits of no cure other than nature may perform, nor is it contagious, from its being the effect of extra causes. All sheep which feed in moist places, are not alike affected; some escape fortuitously, and do not imbibe the insects; others perhaps imbibe, but from a peculiar state of the stomach, discharge them without injury. Some few have their livers healed, but generally speaking, the disease is fatal. Sheep do not always waste away with this disorder; they sometimes die full fat; and the experience of Smithfield tends to show, that it is no injury to the mutton. A small pendulous bag appears under the jaws in the latter stages of the disorder; when this appears, the farmer may proceed to save his wool, and pelt, for death invariably follows this symptom.

The fleeces are clipped.—Sheep in all parts of the United States, Smith's island excepted, are clipped once a year. This should be done as early as the season will permit, or considerable loss in wool will ensue, for the animal seeks to get rid of its winter's coat, so soon as spring appears, and will rub off much wool in course of a short time. The Smith's island sheep are clipped in April and September—the reasons and practice will be made known to the public in a memoir hereafter. Lambs, unless early and well grown, should not be sheared the first season. The practice of shearing lambs has been recommended by Dr. Logan, and other distinguished agriculturists—but it can only answer in favourable seasons, and when the animals are in fine keep. A wet season, I should suppose, would be very fatal to shorn lambs.

The state of our population and habits.—If sixteen years ago the state of our population and habits was thought unfriendly to sheep farming, the state of our country is peculiarly adapted to its encouragement and practice at this time. It is amazing that the people of the United States should so long have been blinded, to a sense of their true interests.—Strange, that a people who loved the name of independence, should neglect the practice by which it is preserved. The rage for importation, seemed to have made our citizens forget, that Providence had blessed them with a country abounding with every possible resource for their wants. Feeble and helpless, indeed, must have been the colonists, before the revolution, who imported handles from England to fit to their scythes and hoes. Was America so scarce of wood as to be unable to furnish this humble requisite—or rather was American skill and industry, still more wanting.

The nation has at length awakened from its long and dangerous slumber. It is becoming praise worthy for a man to clothe himself from the resources of his farm, and the industry of his family. Independence, the price of the patriot's labours and martyrs' blood, will bless our land, while industry, with her joyous train, happiness and content, shall hail the virtuous regeneration of our country. The American citizen will no longer seek from abroad those comforts which are now to be found at home: and the American Republic shall present to the world the commanding spectacle of a nation, great within itself—a people prosperous and happy in the enjoyments derived from domestic industry, and a Republic flourishing in the blessings of rational liberty. May we sleep no more.

EXTRAORDINARY WEIGHT OF A JERSEY SHEEP.

[The following comes in a way to satisfy us of its accuracy:]

A wether, 4 years old, fatted and lately sold by Mr. Solomon Holcomb, of Amwell township, Hunterdon county, N. J., to a victualler in Trenton, for ninety dollars, weighed and was disposed of as follows:

Total weight of the quarters, ...	148½ lbs.
Saddle—83 lbs. sold for . .	$83
Skin and fleece, 19½ lbs. sold for	20
Other parts, a portion not then sold, ...	19.40
	$122.40
The rough tallow weighed	26½ lbs.

The wether was one of three lambs at the same yeaning, and is supposed to be a mixture of the common sheep of the country with the Bakewell stock, and a very little Tunisian blood in him.

He was fed with grain from September last, and was killed in the latter part of March.

WEIGHT OF MILK AND PRICE OF SHEEP IN CONNECTICUT.

Extract to the Editor.

East Windsor, Jan. 29, 1825.

Your letter of 29th September was duly received. You ask me what proportion the measure of milk bears to the weight. A pint, wine measure, weighs one pound. It is generally supposed rich milk is the heaviest. I have never tried an experiment to ascertain the fact, but am inclined to believe milk that will produce but little butter, is *as heavy* as any. My cow will be eight years old next spring, and is a fine red, and has the finest formed bag I have *ever* seen. When full, the distance between her forward teats, is 10½ inches; side teats 8½ inches; and hind ones 7½ inches—is almost square. I have sold one of my Saxon Bucks for $130—two at $120 each—one for $100—and half of another for $100—one Ewe for $110, and three for $100 each.

[The following communication to the Pennsylvania Agricultural Society, appears to have arisen from a series of letters published by Col. Pickering in the New England Farmer, in which he endeavours to prove, that English neat cattle are very little better than ours. We so perfectly coincide in the high opinion expressed of the agricultural labours of this distinguished individual, that we cannot hesitate to give the following paper—whilst we have pleasure in republishing, at this time, the commencement of Col. Pickering's letter, No. 3, evincing the same spirit of urbanity, at the time he attempts to overthrow the arguments which have been adduced to show, that American farm stock may be successfully improved by the introduction of the best races from Europe.]

From the New England Farmer, April 29.

ON IMPROVING THE NATIVE BREED OF NEW ENGLAND CATTLE.

In the last number of the Massachusetts Agricultural Repository and Journal, (No. 3, vol. 8,) are some communications from John Hare Powel, Esq., to the Pennsylvania Agricultural Society, from whose memoirs they were extracted. The subject of the communications, is the various breeds of neat cattle. The editors of the Repository, in introducing those papers, say—"We give no opinion as to the soundness of Mr. Powel's opinion; we mean to hold an even balance between all the contending parties. This, however, we owe to Mr. Powel, to say, in zeal, public spirit, industry, and experience, he yields to no man." "I have (says Col. Pickering,) the pleasure of knowing Mr. Powel; and have been gratified in seeing his signal display of talent, and energy, in applying his ample means, to improve the agriculture of our country.

[Col. Pickering's four numbers will be published, consecutively, in the American Farmer—commencing their insertion in No. 11, June 10.]

REPLY TO COL. PICKERING—ON NATIVE CATTLE.

JONATHAN ROBERTS, ESQ.

President of the Penn. Agricultural Society:

DEAR SIR,

Col. Pickering has given the spur to my hobby, in a series of letters published in the New England Farmer, wherein I am honoured, by direct allusions, to my communications and myself.

I am flattered by the commendation of this venerable gentleman, and am aware of the distinction, which his interesting, and elaborate papers, cannot fail to confer upon my notices on cattle; but I will not protract the discussion, by quotations from British autnorities, which cannot bear upon questions that had not arisen, nor upon races of animals, which "50 and 60 years since" had not appeared.

I gladly embrace the opportunity he has given, for illustrating "the positions I had assumed;" for although as a practical man, I pass without notice, the fretful effusions of those, who vainly give their names, whilst farming *but upon paper*, I would elicit the sentiments of a gentleman, who has been distinguished, not by *writing*, but by thinking, and acting, and among farmers, by his labours, and success at the tail of the plough.

My shelves are loaded with British agricultural books. I have all that "Marshall" ever wrote—I might, from the quantity, suppose all he ever thought. I knew "Young"—I heard his lectures—he was a good talker, a bad farmer, but a most interesting man. I made tours in the *same counties* fifty years after him. I lounged during three years about England, and saw, every variety of cattle, which the bleak mountains of Scotland, or the rich vales of Yorkshire, and Lincolnshire, are fitted to bear.

All English cows, are not good: if some were not bad, high prices would not be paid for improved bulls, by "mere farmers, to make their stock good.

Col Pickering states from "Young's" tour, made 50 or 60 years ago, "some cows gave only two gallons of milk a day, while others gave 3, 4, 5, 6, 7, 8 and *some 9 gallons of milk a day—the average quantity 5 gallons per cow.*" In another district, "a dairy of MIDDLING cows yielded from *4 to 7 pounds of butter per week,*" equal to 208 or 365 *pounds per annum.* "The best cows of the Lincolnshire breed will give, on an average, 6 gallons of milk a day, *seven or eight pounds of butter a week,*" *equal to* 365 *or* 117 *pounds of butter a year.*

He further informs us, from the highest authority, that near Framingham, Massachusetts, a dairy of 7 cows, in "six months, commencing the *latter part of May, and ending in November,* produced 941½ pounds of butter, and 1300 pounds of skim-milk cheese—being nearly 5¼ pounds of butter, and 7 pounds of cheese, for each cow, for six months." But, he continues, the "common product of dairies in five other parts of the state, *averaged only* 92 pounds of butter *annually,* and as much skim-milk cheese"—*about* 1¾ *pounds of butter a week,* and the same quantity of skim-milk cheese per cow. Seven picked cows. fed purposely—selected, and recorded, as the *best* specimen of the *best* cows—of one of the *best* agricultural districts—of the *best* of the New England states—under the *best* management—produced, during the *best* term of their milking—in the *best* pasturage season, "5¼ pounds of butter, and 7 pounds of skim-milk cheese, each, per week." We are told, one of the seven cows "was purchased the latter end of June, with her calf; the calf being kept three and an half weeks, the cow could not contribute to the product of the dairy, until after the middle of July.' Here is a dairy of *fresh* cows, taken for a particular object—nursed with peculiar care—their product so accurately ascertained, that an half pound, in the aggregate of nearly a thousand, is stated; yet during *the six months,* when *the largest quantity* could be derived from them, and at *the very season, when both the climate and the food* were best fitted for the object in view, they produced but 5¼ pounds of butter and 7 pounds of cheese, per week.

But we have been assured by Col. Pickering, and by Arthur Young, who wrote "50 or 60 years" ago, that an English "*dairy of middling* cows, yielded from 4 to 7 pounds of butter per week"—that the "best cows of the Lincolnshire breed would give, *on an average,* 7 *or* 8 *pounds* of butter a week." If, then, 7 Lincolnshire cows, had been taken, even "50 or 60 years ago," they would have given annually from 2,548 to 2,912 pounds of butter. A *dairy* of cows, means in England, and I believe generally in America, not the cows which are fresh, but the aggregate number employed for the dairy house, *fresh and dry.*

We are informed, that "scarcely any butter and cheese are made by the New England farmers, in general, except during the pasturage season." It is to be presumed, that the thrifty husbandmen of Massachusetts would make butter and cheese, at all seasons, if the product of their dairies would repay the labour and expense. This, however, could not be done, where the common product of the dairies in five parts of the state, averaged only 1¾ pounds of butter per week from each cow. If the English cows, which "gave 9 gallons' daily, had been milked separately, (admitting that only one pound of butter could have been obtained from 11 to 16 quarts of milk,) each cow would have afforded from 15¾ *to* 18 *pounds of butter* a week. If they had been forced, as the Danvers, or Oakes cow, by "corn meal, skim milk, butter-milk, gruel, and so much food in the stable that they would have lain down upon the pasture," and the milk had been placed in an "extra number of pans," how much they would have surpassed the Danvers cow, no man can know. I am not fond of deductions from figures, in relation to agricultural matters; I am much more disposed, to take the impressions founded upon a series of evidence, arising from general investigation, than isolated facts. It will be recollected, that I have made no allusion, in the "opinions" founded upon my "experience," to animals which had died twenty years before I was born—nor have I at any time asserted, that the English dairies were better than ours. It has been left for the advocates of "native" dairies to show, that the annual products of Massachusetts dairies, in five instances out of six, are, when contrasted with "*middling* English dairies," as 92 to 286—the product of the Oakes cow, to that of Cramp's English cow, as 484¼ to 675—and the product of an American dairy of 7 picked fresh cows, during the best pasturage season, to a whole dairy of English cows, "*on a medium,*" neither fresh nor picked, as 5¼ to 6.

I have adhered to the British authorities which Col. Pickering had given in his letters, intended to show how little can be gained, by the use of English cattle, for the improvement of ours, of which he confesses "very few can be found of superior character." I shall, by American proofs, hereafter attempt to establish, that much has been gained—that much more may be acquired, by taking advantage of the labours of nearly a century—of the skill of even "professional breeders," whose exertions have been directed by the science of Sir Joseph Banks, Sir John Sebright, and Cline, whose deductions have been made with the diligence and habits of "practical men"—and whose success has been measured by the standards which every man can best comprehend, "*high prices and profit.*"

JOHN HARE POWEL.

Powelton, Phila. county, 1825.

NOTE.

Massachusetts Agricultural Journal, vol. 4, *page* 254, *quoted by Col. Pickering.*

"Mr. Oakes bought her in April, 1813, at which time she was *five* years old. He made from her the first year, without any extra feeding, 180 *pounds* of butter."

Col. Pickering adds, "the cow was purchased out of a common drove of cattle, probably from New Hampshire." I apprehend the acceptation of the term, *native,* requires some definition.

We had been told, that the superiority of New England cattle, proceeded from the excellence of the Devon stock, traced to the embarkation some ages since, of our ancestors at Plymouth, England. Mr. Welles' cow, "descended by a cross from Mr. Stuart's cow," imported nearly thirty years ago, is criticised, as of "English breed." How much of English blood was traced in Mr. Welles' cow, remains to be shewn—and of what blood, and in what part of America, the Oakes cow was produced, we have no means to ascertain.

I remember Mr Stuart's cow when a youth. She was not of a breed which I most approve—but it appears that Mr. Welles' cow, with but little of English blood, was "purchased at a high price, as an excellent milker, and did not disappoint the expectations" of the gentleman by whom she was bought, and by whom the Oakes cow was at the same time possessed. The Massachusetts Journal has shown, that the Oakes cow, produced when five years old, (not four,) but 180 pounds of butter, in the first year—and that when one of the "Trustees" had requested Mr. Oakes to keep a particular account "this year (1816.)" she produced 484¼ pounds upon *extraordinary keep.*

Quere—Whether the product of a cow, which yielded only 180 pounds when not forced, and which yielded 484¼ pounds when forced, by "an extraordinary quantity of rich food," is to be brought in proof of the excellence of "native" cattle, when her origin is not shown—or should be adduced, in proof of the ingenuity, and skill, of the New England farmer, who can, by substituting milk for water, corn meal for grass, make the same animal produce twice as much as common farmers could hope to obtain.

"As DAIRY CATTLE, the Devonshire breed are not excellent. Rearing for the East country GRAZIERS has ever, or long, been the main object of the cattle farmers of this county."—*West of England, vol.* 1. *page* 242—written by "the ingenious Mr. Marshall, (according to Col. Pickering, letter No. 1,) who travelled over England, taking up his residence for many months, in a central station of every large district, to survey and note the course of husbandry in each."

TO PREVENT RIVER BANKS WASHING.

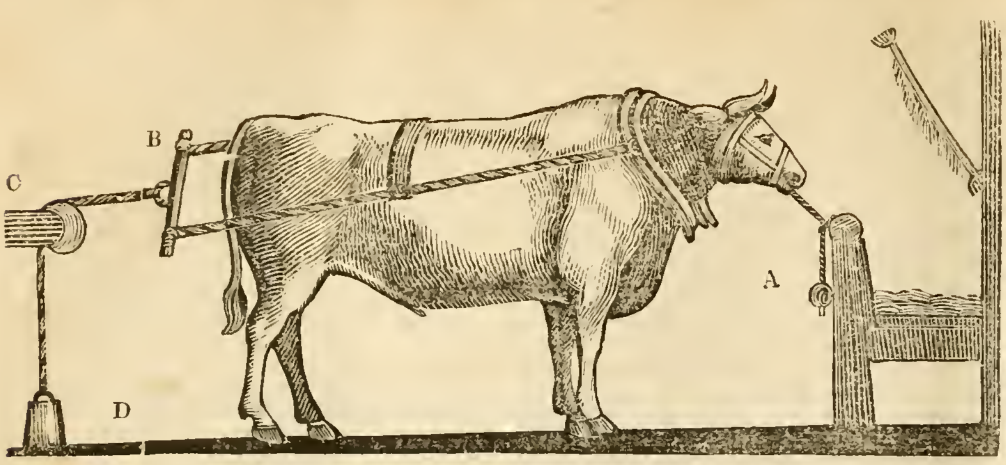
Columbia, S C. May 7, 1825.

John S. Skinner, Esq.

I observed in one of your late American Farmers, that one of your correspondents requests information as to the best mode of securing the banks of a river from being washed away. I cannot pretend to know the best mode; but I will give your correspondent a description of what I have seen adopted on the bank of a canal, when I was last in France.

At a place where the canal of St. Quentin, after having been carried under ground for several miles, issues from its subterraneous course, (the bank was very high, I should not suppose less than forty or fifty perpendicular feet,)—the slope was what I considered much too steep; it was so much so as to make it almost impossible to walk either up or down it. They were securing it from depredation while I was there, in the following manner: having made the slope smooth and even, and beginning at the bottom, they pinned down, horizontally, fascines, about eight feet long, and probably about 8 inches in diameter, with willow sticks from ¾ to an inch in diameter, and about 2½ or 3 feet in length. These were selected young, smooth and green, so that they would take root at the same time as they fastened down the fascines. This being done, the whole surface of the fascines was covered with about 4 inches thick of a good stiff clay, so as completely to cover the fascines that thickness, and leaving the ends of the willow pins that fastened them down, sticking out about 3 or 4 inches. This work being done in the fall, winter, or early in the spring, will secure the willow sticks taking root below, and above the fascines—and, it appears to me, will completely secure the surface from washing away by common occurrences. They certainly had there the advantage of an excellent clay. It appears to me, therefore, that this method of securing a bank, may probably answer the purpose of your inquiring correspondent. It is at least well worth trying, and the best I can think of. It must be observed, that your correspondent wishes also for trees that will afford a shelter from certain winds; but I would advise to plant no tall trees, except it were on, or very near the top of the bank—for in this situation, should a high wind blow them down, the injury to the bank is not likely to be so great at the top as at the bottom. Another thing well worthy of observation, is this—that if the gentleman could procure for the pins, *osier,* (*willow used for basket making,*) this security to his bank might be attended with a source of considerable profit, for it is every where a valuable article. I do not know whether it can be procured conveniently in your part of the world; but, although I have not much of it, I am very willing to give a little of what I have, to gentlemen who will afford me the means of sending the cuttings at any time in fall, winter, or spring. Communications through your paper, or directly to me, (*postage paid,*) I would attend to with pleasure.

I am, very respectfully,
Dear sir,
Your obedient serv't, N. H.



AN EASY METHOD OF ACCUSTOMING ANIMALS TO DRAW.

Translated from the French, by the Ed. Am. Farmer.

THE readiest way to make animals submit to the yoke or harness, is to habituate them gradually to the draft, in the very act of satisfying the cravings of hunger. For this purpose, attach them to the manger by means of a cord, which runs through a ring—and at the extremity of which a weight is attached, as represented in the annexed figure, so that the animal may at pleasure approach or recede from the manger. A collar is put on the animal with two cords fixed to a bar or swingle tree, to which another cord is attached at B, which passes through the pulley at C, and to which is suspended a weight, to be increased or diminished at pleasure—things being thus arranged, forage is put in the rack. The animal, when pressed by hunger, approaches his food; in doing which he raises the weight, and keeps it suspended as long as he continues to eat—and thus contracts the habit of drawing, in a few days. He is free to relax his exertions, for whenever he recedes, the weight reposes on the ground.

FROM THE FARMERS' JOURNAL—ENG.

ON FALLOWS.

SIR, *Sezincot, Dec.* 15, 1824.

IN my letter on the subject of Fallows, inserted in your Journal of the 16th inst. having endeavoured to show the impropriety and the evil effects of attempting to substitute turnips and other green crops for Summer Fallows on stiff clay lands. I now, according to promise, avail myself of this opportunity to point out some of the leading advantages which result from the practice of making Summer Fallows on all such lands.

In the first place, this system possesses the peculiar advantage of cleansing stiff land of all kinds of weeds and worthless grasses. The degree of exertion necessary to clean foul land in general, depends chiefly upon the nature of the soil and the state of the weather. Dry and free soils, in a favourable season, are easily cleansed of all their impurities. The repeated operations of the plough and other appropriate implements, under the direction of a skilful husbandman, quickly bring the weeds and grass roots to the surface, after which the process is attended with very little difficulty. Hence arises the propriety and facility of growing turnips on such land. The case is not so, however, on soils of a stiff and cohesive texture. The stubborn masses of clay, recently ploughed up in a moist state, and interwoven with couch and the roots of other grasses and weeds, are not to be speedily reduced, and their particles separated by the application of the above mentioned implements, &c.; and when, by the effects of dry weather, these are converted into clods of impenetrable hardness and tenacity, their component parts cannot be separated by the art of man. Nothing therefore can exceed the folly of planting green crops upon such land in this condition: with equal prospect of success might we attempt to cultivate the vine in the open air, upon the Grampian hills, or on the mountains of Wales. As the roots of weeds and grasses cannot be separated from land in this condition, neither can their destruction be effected by instantaneous efforts. It is under the slow but certain operations of time only, that solar and atmospheric influences, aided by the repeated applications of the plough, &c. can destroy the vegetative power of the noxious roots bound up in the soil, which by thus being brought into a state of decomposition, are rendered subservient to the production of future crops. But the destruction of weeds and noxious grasses is not the only cleansing operation attending naked fallows: the same salutary process effectually clears the ground of various kinds of insects and grubs. It is a well known fact, that the insect tribes commit their depredations on thé foliage of corn and grain crops, while the wire-worm and various other grubs powerfully prey upon the roots. Both are assiduous in their attacks, and both equally successful in effecting the destruction of the produce of the fields. Like the two grand divisions of a besieging army, the former assuming the attitude of an open enemy, boldly scales the walls, and in defiance of an opposing power, forcibly enters the citadel, plants his victorious banners upon the ramparts, and revels on the spoils of a vanquished garrison. The latter is characteristic of the latent foe, who secretly sallies forth in the dark, and insidiously undermining the foundations of the fortress, lays its stately edifices in ruins, and levels their towering grandeur with the ground. Such, frequently, on the corn fields, are the devastations of these little depredators; such the destructive influence of this, apparently insignificant, but powerful enemy to the vegetable kingdom. In the absence of Summer Fallows, the grubs particularly are numerously engendered in the soil, and by a long course of uninterrupted cropping, they are fostered and suffered to enjoy the undisturbed possession of their native residence. Nothing but a good Summer Fallow can radically destroy these noxious reptiles. By this, they are deprived of food, in consequence of which many of them die; and those that survive, being frequently turned up to the surface by the operations of the plough, are exposed to the destructive effects of a scorching sun, and to the keen researches, and devouring beaks of those sable feathered tribes which so much frequent the fallows during the summer evenings. Another advantage attending naked Summer Fallows on stiff clays, is their tendency to prepare the land properly for the application of manure. It is well known to those who possess any knowledge of the economy of vegetation, that plants receive the greater part of their nourishment at the root, by means of capillary attraction; but in order that the tender roots may properly perform their functions, a previous preparation of the soil and manure is absolutely necessary. In vain do we bury manure recently made, under solid furrows of tenacious clay, through which the tender fibres of plants can never penetrate, and with which the manure never can be incorporated. The soil must first be reduced to a certain degree of friability, its parts must be divided and rendered permeable to the action of the atmosphere. This is effected by being repeatedly turned over in the summer months. The heat emitted by the sun having extracted the moisture from the soil, its power of absorption is increased; and on the application of rain its parts become soluble; and hard and impenetrable clods are reduced into genial mould. Manure, applied to land in this state, naturally undergoes a chemical process in the soil, by which it becomes decomposed. its particles are rendered volatile, and it is brought into such a state of fluidity as is necessary for its essential parts to be taken up into the roots of the plants, under which it is deposited. Finally, we may add, that Summer Fallows prepare the land for receiving fertility from the atmosphere. It has been ascertained by scientific researches, that certain portions of rarified matter are communicated to plants by the atmosphere, which being absorbed by the leaves, promote the purposes of vegetation. When land is rendered porous by the effects of Summer Fallows, and void of plants of every description, it is extremely probable, that this subtilized matter or portions of the atmosphere are, by the power of gravitation, or the elasticity of the air, deposited in the soil and tend to increase its fertility. As a proof of this, we have frequently observed, that sterile mould, dug out of trenches and thrown up in banks, after remaining some length of time, being levelled down again, becomes very productive. This change seems to be effected by the influence of the air only. Thus we have seen that periodical Summer Fallows, on stiff clay lands, are absolutely necessary, as they cleanse the soil of all its impurities, and remove every obstacle to vegetation. They restore the exhausted powers of production; and by fitting the land for another profitable course of crops, reward the husbandman for his expense and toil.

I am, sir, your most obed't h'ble ser'vt,

W. GIBSON.

PROSPECT OF CROPS.

Extract.

West River, May 19, 1825.

I have about 110,000 tobacco plants out, and fairly growing; 25,000 of which were planted three weeks ago, and have been worked over. What d'ye think of that?

HORTICULTURE.

ON THE CULTURE OF THE VINE,

THE SUGGESTIONS OF EXPERIENCE IN MARYLAND.

DEAR SIR, *Oxford, May* 14, 1825.

Finding in your very useful and valuable work, some differerce of opinion respecting the culture of the vine, I beg leave to make a few remarks, which I hope will be of some use to our friends.

I have cultivated the vine, in a small way, many years, with success. I would, from the following statement, recommend all gentlemen to raise grapes, who wish them, from layers, where they can be had—if not, cuttings; yet I find, out of upwards of twenty sorts, when I had my white sweet water, do Muscat, do. Arbocie, &c.. all white, which I kept to themselves, in about 17 years they begun to fail: yet by preparing the soil with gravel and proper manure, they can be kept up many years longer. But let it be understood that other sorts, of different colours and descriptions, do not fail, but grow better, and I think will be good, or at least some of them, for a man's age.

I believe grape vines raised from seed will last as long as an oak tree—there is no doubt but with proper care they will last several hundred years. See the account of the great vine at Hampton Court palace, (England,) which still, or recently, has borne several thousand weight per annum; see the Treatise on Forsyth, written by Cobbett, p. 79, where you will find it was planted in the reign of king William. But let it be remembered, it is a long time before vines from seed will bear in this climate, and many of them will never bear, nor show any thing like fruit—and when a few do bear, it may not be genuine, or be a better sort. I would recommend those that cannot obtain layers or cuttings to suit, and must plant seed, to take the top at 3 years old, (if it has made any growth,) and bend it to the ground in June, slipe off the bark from each side two or three inches long, and put it in the earth from two to three inches deep, and press the earth hard to it, and the very top end left out a foot—and the next spring cut away the mother vine, and prune the other to three eyes, and by that means it will bear fruit, if not entirely barren, much sooner than it otherwise would do; and no doubt but the vine, if not of some of the sorts mentioned, will live many years. Besides, layers can be renewed at pleasure, and will bear better than those from seed will, until old. Besides, it seems like labour in vain for a man to raise all his vines from seed, when he must live so many years before he can see the fruits of his labour. Vines should be planted in a soil prepared for the purpose, and trained, while young, to 45° elevation, with only one stem for three or four years; and to have the fruit fine, prune close, except the vines make very spontaneous growth, then a few more eyes may be left. But every sort of grapevine does not demand the same treatment—neither do the vines of every age.

I am, dear sir, yours, with due respect,

JOHN WILLIS.

INTERNAL IMPROVEMENTS.

RAIL-WAYS, CANALS, ROADS, &c.

No. 3.

Having now explained some of the properties of a railway, it is intended to compare them with roads and canals, in reference to the division made in the beginning of this essay; viz. 1. Expense. 2. Expedition. 3. Safety, and 4. Certainty.

The expense of construction must vary in different countries, in proportion to the value of land, iron, stone and labour. The land required for a railway is much less than the quantity occupied by a canal. In England; a rail road has been actually made over a bog for the small sum of 300 pounds sterling per mile. This is the cheapest on record.[*] The cost of a single stone railway in Linlithgow, was shown above to amount to 528*l.* per mile. The railway of the Earl of Glasgow, as shown above, was 660*l.* per mile: these required no embankments or bridges. The rail roads now making in Great Britain, are estimated at 1000*l.* per mile; and in *one or two* cases, from 9000 to 12,000*l.* per mile; expensive bridges and deep cuttings, &c. being included in these instances, in addition to many other expenses, stated in a previous note. We may safely state the *average price of a single railway* calculated for horse power in Great Britain, (previously to the late alteration in the price of iron,) at 1000*l* *per mile, exclusive of engines, deep cuttings and bridges.* The extra expense in the United States, will of course vary. In this country, commerce is not sufficiently active to require two sets of rails; and as places to turn out without delay or difficulty, may be situated every half mile or even at less distances, 2000*l.* would probably be an ample average allowance for a railway composed of one set of tracks, similarly situated. Whenever commerce shall be sufficiently active, a second, or returning set of tracks; can be laid at a small additional expense. The two other tracks used in England for the transportation of the mail and passengers, at a velocity greatly exceeding six miles per hour, will not be required in this country for many years.

Railways composed of wood may be advantageously constructed at a very small expense in the United States, *when the quantum of transportation is inconsiderable.* these rail roads are preferable to those composed of iron, although the weight which a horse is capable of drawing on them is less.—(See the commencement of this essay.)

Here let us observe, that *rail roads may be made to accommodate any amount of commerce.* If the road should be completely occupied by cars, a circumstance almost impossible, a parallel set of tracks may be easily added; but the amount of commerce on a canal is limited by the supply of water, and the time necessary to pass the locks. (which, however, may be increased in number in some cases, if the water be sufficient, thereby increasing the expense.) The quantity of commerce is also limited by the duration of frost and drought. *Rail roads can be made in every situation.* The majority of them are at the present time subterraneous, viz. in mines. Canals are frequently impracticable from a deficiency of water, or when hills, rocks, or a limestone district are encountered. The distance of two given stations is less by a railway than a canal, the length of the latter must be regulated by the summit level, and if the supply of water be drawn wholly from thence, one summit only can be adopted: but on a railway the number may be unlimited. *Railways can be executed in a much shorter time, and in the majority of cases at a less expense, than canals[*] or turnpike roads;* and are preserved and repaired with more facility; when repairs are necessary, a substitute can be easily procured, and no delay in consequence occurs, as on canals and turnpikes. When the locks or banks of a canal are destroyed or injured, months may elapse before the damage can be repaired. If the course of trade should be turned into other channels, railways can be removed to the more favourable station; or the materials (which are always valuable,) may be sold. Rail roads can be used all the winter, if perfectly constructed; even snow offers no impediment.[†] The drought in summer, and ice in winter, are serious obstacles to the utility of canals; rain and frost are equally so on roads. Railways are crossed with great facility. The road crossing the tracks must be paved *two or three inches higher than the railway.* A trench two or three inches wide and deep, containing the iron tracks, effectually protects them from the contact of wheels traversing the line. Canals require expensive and extremely inconvenient bridges.

The companies recently organized in Great Britain, assert, that by the operation of a locomotive engine, on a railway constructed for the purpose, merchandize can be transported at one-third of the expense which is at present required on canals, and with three times the velocity: (it is not stated whether the tolls are considered in this estimate.) The expense of canal conveyance has been demonstrated to be as 1 to 20, compared with the turnpikes constructed in the most approved manner; therefore the expense of conveyance by turnpike roads, will be to the expense by locomotive engines on a railway, as 60 to 1, if the tolls be not considered.[*] To illustrate this: If it be possible to carry this plan into execution in Pennsylvania, with the same advantages, produce can be transported at much less expense from Pittsburg, distant 287 miles, (350 by the rail road probably,) than from Germantown to Philadelphia, by the present turnpike, a distance of only 9 miles! Market supplies are generally drawn from a circle of twenty miles diameter, or ten miles radius. These supplies could be obtained at the same expense, from sixty times the distance, by the rail road and locomotive engine, viz. from a circle of 600 miles radius, or 1200 miles diameter. (The area or contents of a circle of 20 miles, is to the area of a circle of 1200 diameter, as 1 to 3,600) *i. e. the country whence our supplies could be drawn, would be* 3,600 *times more extensive than it is at present!* This may appear rather startling to some persons, *but if the above data be correct,* this deduction is unquestionably legitimate.

If horse power be employed on railways, a horse, and a boy to direct him, can transport on a railway of the best form, (as shown above,) about fourteen tons, at the rate of three miles per hour. One boy can attend to many horses and cars if necessary; whereas on a canal, one horse, a boy, and a man, are absolutely necessary to every boat, and sometimes another bargeman is requisite. On a rail road, the expense of a man being saved, two additional horses may be attached to the cars, with this expense. The united efforts of the three horses can transport 28 tons of merchandize, (or 42 tons, the cars inclusive) three miles per hour; a weight greater than it is deemed expedient to transport on canals.[†] With locomotive engines, (as I have stated above,) even more (75 tons) may be transported at the same expense in Great Britain, which is there required for the transportation of 25 tons on canals.[‡]

In the United States, the limited amount of commerce, the comparative expense of coal, iron, and machinery, will deprive us of this prodigious comparative advantage.

The following estimates are offered to exhibit the probable expense of transportation in this state. As the toll levied is not a fixed quantity, but depends on the amount of transportation, and the expense of repairing

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[*] See Supplement to the Encyclopedia Britannica.

[*] In a level district, and through favourable soil, canals can be constructed for less than railways.

[†] A small scraper attached to the leading car effectually removes snow, or other impediments.

[*] See the remarks in the appendix to this essay, in which the operation of locomotive engines is compared with horses.

[†] On the majority of canals, it has been ascertained to be most economical to employ boats conveying 15 to 25 tons; and in some instances, even when the canal would admit a boat of larger dimensions. On some canals, where the quantity of transportation is very considerable, boats of larger size are more economical: but the number of canals of this description is very limited. The reason of this difference is, that high tolls must be charged, when the annual amount of tonnage is small; and on a large canal the tolls must be higher to produce an equal interest on the greater amount of capital expended in their construction. A small cargo is obtained with more facility and less delay. A sufficient supply of water is procured with more certainty and economy for a small canal; and small boats can convey the limited amount of merchandize.

[‡] The tolls on the English canals are very high; and if they be considered in the prospectus of the Companies, merchandize may be transported with great facility at one-third of the expense requisite on canals; but as the quantity transported will be immense, and the engine proceed with great velocity, and *coals, &c. are very cheap,*—if the same tolls be charged on canals and railways, the expense will probably be 3 to 1; or 60 to 1, compared with transportation by the best turnpikes.

The *expense of carriage* on an inclined plane, when a rail road is used, compared with canals, depends on the inclination. On a level, it has been shown, that the canal is more expensive: and on a descent, the rail road requiring no locks, is far less expensive to construct, and a much greater weight can be transported by a given power. In ascending, locks are of course required on canals, the expense of constructing which, *in a durable and correct manner*, is from 600, to 1400 dollars per foot, equal to an average of 1000 dollars per foot. *If a railway, in the form of an inclined plane, or a lift, be employed, one horse can elevate twenty-one tons nine feet and a half in fifteen minutes;* or three horses, (those employed in dragging the cars for instance,) can elevate the same in five minutes. Hence their advantage in economy and expedition.* Where *rapid conveyance* is required, in consequence of a law of motion stated in the following paragraph, railways offer the only medium for transportation that can rationally be adopted; where the motion required is slow, viz. less than two miles per hour, water conveyance, or canals, are preferable, in a mild climate, when the expense of construction is equal, or not greatly exceeding that required for a rail road. In a rapid descent, however, railways are decidedly preferable in any circumstances.†

2d Expedition. On canals, a given weight can be transported by one horse, with a certain velocity; *the addition of another horse will not double the velocity;* for the resistance to bodies moving in fluids is (according to the well known law,) *as the square of their velocity.* Hence, if a weight drawn by a horse at the rate of one mile per hour, be required to be transported with a velocity of two miles per hour, *two horses will be unable to effect it;* it will require the exertions of *four.* If treble the velocity, viz. three miles, it will require nine: if four miles, it will require sixteen: *if ten miles, it will require one hundred horses!!!* thus increasing in a very rapid ratio.‡ The swell, or undulations in the water, increase in the same proportion; and the last mentioned velocity, viz. ten miles, would cause an agitation that would, in a very short period, destroy a canal.—Hence boats are usually prohibited a velocity exceeding three or four miles an hour on canals, (or two miles for boats of burthen.) *On a railway, on the contrary, equal increments of power, produce equal increments or increase, of velocity,* which is always in proportion to the friction.‖ *In this consists the great advantage of rail roads compared with canals.* It is contemplated in Great Britain to convey the mail and passengers at the rate of fifteen miles per hour. Hence their utility in war.

Great delay occurs on canals, particularly where locks are numerous, when an ascending and a descending boat arrive at the same time, at a lock, or series of locks. One of them must wait during the time occupied by the other in passing, or a double set of locks, (and of course a double expenditure,) must offer the alternative.*

3. Safety. All articles may be transported on railways without risk of damage by breaking; the uniformity of motion resembling that of water conveyance. There is no risk from damage by water—no small advantage over canals in an exposed situation.

The health of a country is promoted by the adoption of railways, as no poisonous miasmata, generating disease, which invariably arise from stagnant water, will be produced; dust is almost unknown on rail roads; hence the comfort of travellers, and those residing on the road side, will be augmented.

4th. Certainty. The rail road is not affected by the vicissitudes of the weather, and is easily and expeditiously repaired if injured by accident. (Canals, when injured by design or accident, may require many months to repair—a single lock lately at Albany required one or two months, detaining all the vessels employed.) Hence this object is also attained.

Having now shown that railways are preferable in *economy* and perfect *practicability* of construction, and *cost of conveyance*, and in *expedition, safety*, and *certainty*, may we not confidently anticipate the period; when canals will no longer be *generally* used; and that rail roads will be known as the only rational medium of conveyance? when we shall behold them meandering through every district where man has fixed his habitation? when the inhabitants of America, from Mexico to Hudson's Bay,—of Astoria on the Pacific Ocean, and Philadelphia on the Atlantic,—shall, by this invention, be converted into neighbours; and the blessings of commercial intercourse be universally diffused; binding together our species in peace and friendship, by the indissoluble bond of community of interest? [*U. S. Gaz.*

MISCELLANEOUS.

ON THE NATURAL HABITS AND THE DOMESTICATION OF WILD TURKIES.

Hanover, (near Wilkesbarre,) May 16, 1825.

DEAR SIR,

For your satisfaction, and by way of information and instruction, with a view to gratify the wishes of General la Fayette, I will here state the result of my own experience in regard to the domestication of wild turkies. Four years ago I procured from the nest of a wild turkey seven eggs, which were placed, while warm, under a common hen in my fowl house. In due time, seven birds were hatched out, which, for the first fortnight, were very shy—but soon afterwards became so familiar as to feed from my hand, and fly up and perch on my head and shoulder, and in this situation would permit me to carry them around my garden. I had a coop made on purpose to house and secure them with the hen

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roads, canals, &c. it is not taken into consideration in these estimates (See note to the Appendix.)

Expense of transporting 100 tons a distance of 100 miles.

N. B. On the turnpikes in the United States, two-thirds of a ton, the wagon inclusive, equal to 8½ cwt. of merchandize is the usual load when horses are constantly employed.

1st.	150 horses at 75 cents per day each	$112 50
	30 men at 75 cents	22 50
		135 00
	It will require 6 days,	6
		810 00
	Add 50 per cent. for the wagon,	405 00
	Or for 150 tons, equal to 100 tons of mdze.	1215 00
2d.	150 horses at 37½ cents per day each, is	56 25
	30 men at 75 cents,	22 50
		78 75
	Requiring 6 days,	6
		472 50
	Add 50 per cent. as above,	236 25
		708 75
3d.	By a canal for 100 tons of merchandize, 5 boats of 20 tons, 5 horses at 75 cts. 5 men at 75, and 5 boys at 50, requiring 5 days,	50 00
4th.	Or 4 boats of 25 tons, 4 horses at 75 cts, 4 men at 75, and 4 boys at 50, requiring 5 days,	40 00
5th.	Or if horses be estimated at 37½ per day,	32 50
	Or	27 75
6th.	On a railway, when horses are employed as the moving power, one man can direct 7 horses, a number sufficient to transport 100 tons 3 miles per hour—7 horses at 75 each, and 1 man at 75 per day, for 4 days	24 00
	Or for 150 tons weight—100 tons of merchandize	36 00
	Or if 37½ be the expense for each horse and 75 per man, the cost per 100 tons	13 50
	Or for 150 tons—100 tons of merchandize	20 25
	If relays are employed, the expense for superintendance will be diminished $1.50	18 75
7th.	By the locomotive steam engine (see the following paragraph) the time will be 26½ hours, and the expense of transporting 100 tons of merchandize (or 150 tons the cars included) will be, when coal is estimated at an average price of 15 cents a bushel,*	20 00
	Or, if the price of coal be 10 cents the bushel, the expense will be about	15 00

But if the tolls charged be not greater than this sum, on 100 tons on railways, (intended for the passage of locomotive engines,) which cost 100 or 200 per cent. more than those now in use, *it would require the passage of many hundred thousand tons per annum, to yield an interest of 5 per cent. on the capital expended in constructing these expensive tracks.* Hence they are useful only in a populous country. (See Appendix.)

A paragraph in the Morning Chronicle mentions some experiments performed with a locomotive engine, near Newcastle, (not mentioning whether the engine was of the improved species or not.) The engine was eight horse power, and consumed five pecks of coals every hour, or ten bushels for eight hours. It drew in addition to its own weight, which was 5 tons, 32 tons and 8 cwt three miles and three quarters per hour, (about two-thirds only of the weight usually drawn by eight horses, *on an improved edge railway*.) If an engine of this description were in operation in Pennsylvania, the expense of transporting the 32 tons 100 miles, would be (coal being estimated at an average price of 15 cents per bushel) $1.50 for thirty miles. Two engineers being alternately employed twelve hours, at 75 cents each, is $1.50, or $6.50 the total expense, and the time about 26½ hours. The prime cost, and wear and tear, of an eight horse power steam-engine, is less than the prime cost (including wear and tear) of 24 horses, to which the power of the engine, perpetually in operation, is equal.

* A high estimate for coals.

* The time required to pass a lock is including the loss of momentum) one minute per foot. Sometimes forty seconds.

† Canals leading to coal and other mines are generally, for the above reasons, more advantageous; hence the canal companies in this state need be under no alarm. Few persons are aware how small a force is requisite to communicate a slow motion to bodies of great magnitude. A large ship of 600 tons, at our wharves; can be slowly moved by the force of a child, (if the water be smooth.) A raft of nearly a mile in length has been drawn (on the Middlesex canal, near Boston) at the rate of one mile per hour, by one yoke of oxen.

‡ This supposes that the power of draught of a horse is equal to the velocity of 1 or 10 miles—but in fact, at this latter velocity his draught is only about 1-10 of his power at 1 mile; consequently, 1000 horses would be requisite for the above purpose.

‖ It is stated in several recent journals that, the same power can propel a weight, 1 or 100 miles an hour with equal ease. The absurdity of this statement it is not necessary to demonstrate. A difference of opinion prevails relative to the quantity of friction at different velocities and over surfaces of various dimensions; some maintain that the friction is a constant quantity, viz. whatever may be the velocity, or extent of surface that the friction will be the same. The fallacy of this theory may be seen by the following experiment: Place a spiral spring as the moving power in a small model car; the spring must exert an equal power in equal periods of time; (similar to the spring of a watch if the car be placed on a smooth, hard, and level plane, the spring will propel the car on this surface, at first with a velocity scarcely perceptible, but gradually increasing to a certain point, *when the resistance, or friction, will balance the moving power*, and the velocity will become uniform. A weight cannot be used for this purpose, as the power is constantly increasing (from the known laws of gravitation.)

* On the Erie Canal this inconvenience is of such magnitude, that double locks are now erecting at the junction canal; 50 *boats are sometimes detained at the locks for* 10 *or* 12 *hours.* A Canal from Utica to Albany is also recommended, in addition to the present, which will not accommodate all the commerce. (See the Report of the commissioners, 1824.)

at night, until they were capable of taking wing and perching out of the reach of enemies, which I considered a very necessary caution. For about the first three weeks I gave them food, consisting in turns of milk curds, finely chopped cheese, bread crumbs, soaked Indian meal, and chopped boiled eggs—and afterwards of soaked bread, wheat, and buckwheat. They had the full range of my garden, which proved a secure retreat for them, and where they constantly kept for 2 or 3 months chasing and feeding on flies and other insects, very greedily—and would come to my call there at any time when I usually fed them. Ants' eggs I sometimes procured for them—and these are the best food that can be given to them while very young. One only of the seven died, and the remaining six lived through the winter in company with my poultry, but more familiar than the latter, as they (the turkies,) would enter the kitchen and pick up food there, and take it, when offered, from the hand. Towards spring they began to prowl out into the adjoining woods by day, but always would return towards evening, and roost, as they were accustomed to do, on some high trees, and sometimes on the top of the barn and out buildings: but as spring approached, their wanderings were prolonged over a day, so that we sometimes did not see them return till the next day—and this roving propensity was increasing, which induced me to determine on sending them off to England as a present to some friends there; and I had no sooner come to this determination, and fixed on the proper shape and size of a coop suitable for their conveyance on ship board, than the mortifying intelligence arrived of their having all been shot that morning by a man who had mistaken them for really wild birds, and which was soon afterwards confirmed by the production of the dead birds themselves. This little history will, as far as it goes, show that thus far the domestication of these birds can be accomplished—but I very much doubt our being enabled to obtain a continuance of the pure wild breed in any other manner than by clipping the wings, from time to time, of the breeders, and thereby confining them within certain prescribed and fenced limits; or, if suffered to range at large, by seeking for and procuring their eggs and hatching them out under common hens. Had my birds lived and continued here through the summer, I do not doubt they would have bred in the woods near my house; but in this case their progeny, and perhaps themselves, would ultimately have forsaken the spot. The wild blood may readily be mixed with that of the domestic turkey, by putting a cock of the former with hens of the tame kind, for he will readily associate with them. Perhaps some of your readers may be enabled to state positively, from experience, more than what I am enabled to do on the subject. However, I am strongly of opinion that the roving propensity of these birds will never entirely forsake them, and that howsoever tame and familiar they may be, they will, in the breeding season, if at liberty, repair to woods and secluded spots, and there nestle and hatch, to the disappointment of the owner. If I were to try the experiment of their breeding while at large, I would have but one cock and one or two hens at a place; for when more are kept, my own experience has proved their constant propensity to rove away to a distance, occasioned, probably, by one exciting the other so to do. A neighbour of mine had a cock of the wild breed, with a hen of the tame kind—and this bird would never prowl away, though the woods adjoined the garden. He was frequently observed to copulate with the hen, and a mixed progeny would have been the result, but for the misfortune of both having been killed, the one by a fox, and the other by a rifle ball, through mistake.

In whatever way Gen. la Fayette may attempt to domesticate the breed of wild turkies, the object, I have no doubt, will be most readily accomplished, if at all, by his sending to France very young birds and rearing them on the spot—and I shall feel great pleasure in supplying you with young birds for his disposal, should I procure, as I will endeavour to do, some eggs from a wild bird's nest, and hatch them out under a domestic hen. C. S.

OPOSSUMS FOR G. W. LA FAYETTE—OBTAINED.

Dear Sir, *Arlington House, May* 10, 1825.

I have read in your last number, an inquiry for opossums, to send to la Grange. I am happy to inform you that my servant Philip Lee, has procured for General la Fayette, two male and two female opossums one of the latter with young, and that they are now on their way to Europe.

The good General recognized Philip, from his likeness to his uncle *Billy*, an old army acquaintance, and the body servant of the commander in chief, in the war of the revolution; called Philip to him and shook him heartily by the hand; and permit me to say, in justice to the most faithful, and most attached of servants, for a period of more than 27 years, that of the thousands of "gratulating hands," the good la Fayette has not grasped the one of an honester man, or of one more respectable in his station in life, than of Philip Lee.

Very truly, my dear sir,
Your friend and serv't,
GEORGE W. P. CUSTIS.

John S. Skinner, Esq.

[Thanks to the friends of Gen. la Fayette, (and what American is not his friend,) opossums enough have been received to stock all Europe. One was left, one night, in the office of the American Farmer, very securely confined in a box, with her nine young ones, as large as middle sized rats. In the night she decamped, with all her family in her pouch, or false belly, ascended the chimney of a three story house, and made her escape. It had not been communicated to her that her destination was to la Grange.]

ENTOMOLOGY.

Dear Sir, *Philadelphia, May* 17, 1825.

The insects sent you by Mr. Harding, mentioned in No. —, I received safely, and found them to be the *Cryptorhyneus nenuphar* of Herbit. The late Professor Peck published an account of this depredator in the Journal of the Massachusetts agricultural society, for January, 1819, under the name of *Rynchænus cerasi;* he was, of course, not aware that the species had long before been described and figured.

The wheat insect, (see Farmer, No. 7.) I have much desired; those you sent me are now in the pupa state; they have undergone considerable pressure on the journey, so that, although the wheat contained four individuals, I am doubtful of obtaining the perfect insect from them. But, it is doubtless, a Hymenopterous insect, and is greatly larger than the Hessian fly. Cannot Mr. Stump obtain the perfect insect? Perhaps it may not yet be too late. If he would put some of the plants in a covered glass vessel, he might secure some that are late in their change.

If either of mine comes out, you shall be informed of it. I remain, respectfully,
Your obed't serv't,
THOMAS SAY.

Mr. Drummond, a banker, has founded and endowed, at his own expense, a professorship of political economy at the University of Oxford, with a salary of 150*l.* per annum.

HOW TO GROW RICH.

Two tradesmen, in converse, were striving to learn,
What means to make use of, great riches to earn;
A friend who sat near them advis'd with a smile,
"Live on *half* of your *incomes*, and live a great while."

SPORTING OLIO.

Mr. Skinner,

Looking over your useful paper the other day, I was pleased with the sporting intelligence it contained. I refer to the account of the partridge shooting, at Mr. Wilson's, in Somerset county, Maryland. It would have been more gratifying, however, to have had a statement of the number of shots made by each sportsman, so that we might have known the number of birds bagged in a given number of shots by each sportsman. You will confer a favour by inserting the following sporting intelligence:

In December last, two gentlemen from the lower country, Mr. Beverly Randolph and Dr. Dudley, made a shooting excursion into Fauquier county, Virginia. In eight days' shooting, they bagged two hundred and sixty partridges. The best day's shooting was done by Dr. D. who killed, at Mr. Thomas Turner's, in one day, twenty and a half brace, and wounded six, in fifty-five shots. Another day, at Col. Robert Randolph's, the same gentleman killed sixteen brace in thirty-four shots.

A Constant Reader.

New York, May 21.

Boat Race.—Yesterday, a clear and beautiful day, was appointed for the trial of strength and skill between the Whitehall and Staten island boatmen. At 10 o'clock they started from Robin's reef, and for a short distance glided over a smooth surface, head and head—then the Staten islanders gaining, with every oarsman stretching his arm as if to achieve a victory that would immortalize his race. Uncertainty for a moment harrassed the throng which crowded the steam boats and barges that were within calculating distance, while the thousands in Castle Garden and on the battery, were all anxiety and doubt. At length a signal says Whitehall boys up again, and now ahead—they come in view of the gazing multitude, rowing with the greatest rapidity; the Whitehall boys gradually increasing their advantage until they come out at Castle Garden, a distance of near five miles, and were declared victors.

The scene was grand beyond description—our harbor, one of the finest in the world, crowded with boats of all descriptions, loaded to their fill, and our shores, with the neighbouring islands, lined with spectators—the modest and generous deportment of the successful, convincing the equally meritorious but losing party, that they could bear their fortune with the same good grace they did defeat, contributed much to the amusement of the morning.

The winning boat came out from forty to fifty yards ahead, and the time of performing the race was estimated at from 25 to 28 minutes.

The following are the weights of the winning boat and men.—Boat, 163 lbs; 4 Men, 172, 168, 162, 155; Coxswain, (boy) 106. Total 926 lbs.

The Staten island oarsmen lifted their oars 48 times in 60 seconds. The Whitehall men 46 times.

The boat *Whitehall*, was rowed by Albert Cammeyer, Cornelius Cammeyer, Richard Robbins, and Charles Beateaugh, and steered by John Magnus; built by W. & R. De la Montagnie.

The Staten island boat *Richmond*, was built by John Baptist—rowed by Jacob Braisted. Abraham Braisted, Griey Simonson, and Jacob Van Pelt, and steered by John Palmerton.

The purse was $2000, and more than $50,000 were bet on the occasion. After the race, the victorious boat was carried to Castle Garden.

THE FARMER.

Baltimore, Friday. May 27, 1825.

The Trustees of the Maryland Agricultural Society are all requested to meet at the Maryland Tavern, on Saturday, the 28th inst., at 10 A. M.—There will be many details to arrange, in reference to the Exhibition on Wednesday. Dinner will be on the table at half past 2 P. M.

Our great annual Cattle Show and Agricultural Festival commences on *Wednesday next.* To the friends of the society, we are happy to announce, that from all appearances the show will be a splendid one—though there is no doubt that many will lose premiums by leaving things at home, merely because they are apprehensive that they *may* be beaten; as young ladies, with more of false pride than genuine diffidence, refuse to sing, merely because they are not sure of singing *better than any one else.*

The Trustees will be indebted to any one for sending fine animals, household manufactures, &c. &c.—if it be merely to improve the show.

There is now reason to believe that the show of horses will be uncommonly good. Of these there will be many for sale, especially stallions of the purest blood, and the finest figure and action. Those who have good milch cows, could not send them to a better market. It is particularly desirable that those who intend to exhibit for premium, should now lose no time in giving notice to John S. Skinner, *Cor. Sec'y Maryland Agr. Society.*

The President of the United States, and Heads of Departments at Washington, have all been invited to attend. The ploughing match will take place, and the premiums will be delivered on the second day. For handbill of particulars, apply at the office of the American Farmer.

To Correspondents.

In the essay signed Sandy, there are no *new* views of the subject, to warrant the continuance of the controversy respecting horses and oxen, in addition to what he and others had contributed.

His remarks on the communications of Mr. Custis are not in that spirit of courtesy that we wish to prevail. in all discussions, in the American Farmer, and are especially not allowable in an anonymous reply to a correspondent who obliges us, and makes his contributions more acceptable by giving his own name.

WHITE FLINT WHEAT.

The Editor of the American Farmer particularly requests those who sowed the white flint wheat in Maryland and Virginia last fall, to observe, and let him know how it withstands the attacks of the Hessian fly. Now is the time to compare it with other wheat. There is no doubt but the fly will *attack* it, as it does other wheat—but what we want to know by actual observation, and comparison of the notes of different farmers. is, its power, over other wheat, to resist and survive these attacks. An ounce of fact which is now to be gathered, is worth a pound of theory and assertion.

Tobacco.—Col. Joseph Blake, of Calvert county, sold 2 hhds. for $13 per hundred—5 for $10—and 5 for $7 per hundred. Mr. John Leach. of Calvert county, sold 1 hhd. for $15, and 1 for $18 per hundred—one of them a second. Tobacco is not selling so brisk as it was two weeks ago; owing, as is supposed, to the great quantity that has been in the market. 3,000 hhds. have arrived within the last twenty days.

Whole number of Inspections in the three State Warehouses, for the week, ending 26th inst., 1200 hogsheads.

Grain.—1450 bushels Red Wheat was sold this week for $1.05 per bushel—1400 bushels Corn, at 44 cts. per bushel. Lawler Wheat may be quoted at $1.04 to $1.07 per bushel. Best white Washington Wheat, for family flour, none in market, but would command from $1.10 to $1.15 per bushel.

PARTNERSHIP.

Having taken my son-in-law, James Moore, Jr., into partnership in my Agricultural Repository, the business will hereafter be conducted under the firm of Sinclair & Moore. ROBERT SINCLAIR.

SINCLAIR & MOORE have on hand, and offer for sale, at their Agricultural Repository, near Pratt-street wharf,

200 grain Cradles, with best Waldron Scythes, complete
100 grass Scythes and Sneathes, ready hung
100 Cultivators, of the most approved patterns
40 dozen Spring Steel Manure and Hay Forks } low by the dozen
40 do. Hay Rakes }
100 bushels Seed Buckwheat

500 do White flint Wheat, of last crop, for seed, which may be expected here in a few weeks from beyond Albany—it will be carefully put up, and be in good order for shipping southerly. This Wheat has been highly recommended in the American Farmer, vol. 6, page 156 and 235, for being productive and resisting the Hessian fly.

Also, Ploughs of the most approved patterns, made by experienced workmen under our own direction, and ready to deliver at the shortest notice, and will be carefully shipped to any part of the United States.

Also, Wheat Fans
Horse Rakes, for grain and hay
Ruta Baga and best white flat Turnip Seed of a very nice quality, and our own raising
Garden and Field Seed, as usual. *5th Mo.*, 16.

AT PRIVATE SALE,

A Farm of 275 acres, advantageously situated on the river Delaware, in Red Lion hundred, New Castle county, and state of Delaware, within half a mile of Newbold's Landing, at the junction of the Chesapeake and Delaware Canal with the river Delaware—where improvements have spiritedly commenced, and it is confidently believed that it will soon become a city of extensive trade. There is communication with the city of Philadelphia three or four times a day by steam boats and sloops. It joins lands of Wm. Guier, Wm. Montgomery, John and Daniel Newbold, and others.

The line of Canal runs through the property, and there are many other natural advantages which will be readily perceived by any person wishing to purchase. The improvements are a new two story brick house, frame barn, stable, cribs, &c.—a young apple and peach orchard of choice fruit. The land is fertile and well adapted either for grazing or cultivation.

For further particulars, apply to Anthony T. Newbold, No. 13, South Front-street, or to Jared Leavenworth, living on the premises. Terms accommodating, and possession given immediately. *May* 4.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	7	9		
COFFEE, W.I. Green, .	—	17	21	20	25
do. Common,	—	16	17	18	20
COTTON, Louisiana, &c.	—	22	26		
Georgia Upland, . . .	—	22	24		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	11	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32	33		
FISH, Herrings, Sus. new	bbl.	2 18		2 25	
Shad, trimmed, new,	—	6	6 50	7 00	
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	5 25			
Fine, ...	—	4 75			
Susquehanna, superfi.	—			none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	42	44		
Wheat, White, ...	—	1 10	1 15		
do. Red, ...	—	1 03	1 05		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, ...	—	3	3 25	3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	9			
LEATHER, Soal, best,	—	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 50		1 75	
Pitch, ...	—	1 50	1 75	2	
Turpentine, Soft, . .	—	3			
OIL, Whale, common, .	gal.	25	27		
Linseed.	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	35	50		
RICE, fresh, ...	c.lb.	3 50	4		
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	26		37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—	28	30		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	10 25			
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Ground Alum, ...	—	60	65		
SHOT, all sizes.	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by John D. Toy, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

T. G. Fessenden, Esq.
Editor of the New England Farmer.

Dear Sir, *Salem, April* 5, 1825.

Agreeably to my intimation, when I last saw you, I send herewith some papers, numbered I. II. III. IV., on improving our native breed of cattle. The subject is important; and I hope my statements and remarks may contribute to satisfy your readers, that the measure proposed is as practicable as it is important.—Were but two or three farmers in every township of the state, to turn a zealous attention to it, the object would in a few years be accomplished. Whereas, half a century, or more, might elapse before a *general* improvement by foreign crosses would be effected. It remains, too, to be ascertained, whether any other breeds really deserve the preference, in New England, to our native race, improved as it may be, and in so much less time than will be possible by means of a small number of imported cattle. At any rate, improvements in both ways may go hand in hand. and be mutually beneficial to both sorts of improvers.

T. PICKERING.

ON IMPROVING THE NATIVE BREED OF NEW ENGLAND CATTLE.

No. I.

I have long entertained, and repeatedly expressed the opinion, that a fine breed of cattle, peculiarly adapted to the combined objects of the farmers of Massachusetts, and indeed of all New England, might be most readily and extensively obtained, by the spirited exertions of substantial farmers to improve our native breed. My attention has been again drawn to this subject by the last report of the committee of the Worcester Agricultural Society, on milch cows and fat cattle.

The committee say—"Nineteen cows were offered for premiums, and all, except one, of our native breed. They generally had the appearance of extraordinary value, and all gave evidence of intrinsic worth. Their exhibition afforded additional proof, that our own stock of cows need no other improvement than can be obtained by a careful selection and a judicious attention to the origin and management of ner progeny."

The first and third premiums were awarded to two cows of the native breed. Others of the same breed were so good, the committee remark, that another set of judges might have awarded premiums to *them*, instead of those selected by the committee. The second premium was awarded for a half-breed cow, whose sire was the celebrated English bull Denton, belonging to my nephew S. Williams, Esq. of Northborough. I have since learned that this cow was large, well proportioned, and apparently well formed for giving an abundance of rich beef; but that she was not remarkable as a milker.—Nor have I yet met with accounts of any of the most celebrated English breeds that surpass the best cows of our native breed. for the quantity of *butter* their milk will yield; and it is the quantity of *butter*. not of *milk*, that determines the value of a dairy cow. Whether the same rich milk yielding much butter, would be alike productive of cheese, I do not know: but we may well suppose it would make the richest, and consequently the most valuable cheeses.

ENGLISH DAIRIES.

In examining some books of English writers on husbandry, and observing the great and useful changes effected in the forms and qualities of their native breeds, by judicious selections of breeders, by a few intelligent farmers, it seemed evident, that by adopting their methods, similar improvements in the native predominant breed of New England might be obtained.

I believe Arthur Young was the first scientific and practical farmer who travelled through many parts of England, to observe the course of husbandry in all its branches, to note the excellencies and defects, and to publish them for the benefit of his countrymen. This was between fifty and sixty years ago. it was then that he saw the celebrated Robert Bakewell, to whom, he says, England is indebted for the just principles for improving the various breeds of domestic animals.

In his Northern Tour, Young noticed different breeds of cattle, and their characters for milk, butter, and cheese. Some cows gave only two gallons of milk a day, while others gave 3, 4, 5, 6, 7, 8, and some 9 gallons of milk a day; and he states the average quantity to be 5 gallons per cow. Yet the farmers obtained upon a medium, only 2 firkins of butter a year per cow, and cheese about one-third in value of the butter. A firkin of butter is 56 pounds. In one district, where some good cows gave from 6 to 7 gallons of milk a day, the dairies averaged 2 1-2 firkins, or 140 pounds per cow; in another district, 3 firkins, or 168 pounds. In another district, a dairy of middling cows gave from 2 to 4 gallons of milk a day, and yielded from 4 to 7 lbs. of butter per week; thus requiring from 14 to 16 quarts of milk to make 1 pound of butter.—In his Eastern Tour, Young mentions the Lincolnshire breed of cattle, of which he says the best cows will give, on an average, 6 gallons of milk a day, or 7 or 8 pounds of butter a week; thus requiring in one case, 24 quarts of milk to make a pound of butter, and in the other, 21 quarts.

From 35 to 40 years ago, the ingenious Mr. Marshall travelled over England; taking up his residence, for many months, in a central station of every large district, the more accurately to survey and note the course of husbandry in each. In his Rural Economy of Yorkshire, he says that a *good* cow was calculated to yield 3 firkins of butter (168 pounds) and 56 pounds of skim-milk cheese: but he adds, that taking a whole dairy of cows, in which heifers were intermixed, 2 1-2 firkins (140 pounds) per cow, were estimated a good produce, taking the dairy round.

In North Wiltshire, Marshall says the long horned cow has been the established species, time immemorial; and he considers their produce in cheese to be extraordinary—averaging about 400 wt. per cow; (448 lbs.) but they make cheese the year round. They have rich pastures, and their cheeses are rich. The best English cheese I ever tasted was from North Wiltshire. The long horned breed of cattle was that on which Bakewell raised his distinguished improvements.

In Rees' Cyclopedia, a work published a few years ago in England, and since in the United States, under the article *Dairying*, the following statement appears:—That on a medium, four gallons of milk will make a pound of butter; and the quantity of which a dairy of cows of any magnitude, in regard to numbers, may be supposed to yield, may be rated at 6 pounds each, per week, in summer, and from 4 to 5 in winter, *according to the manner of feeding them.*—"In the Epping practice, the average quantity of butter made by a cow, per week, was found to be 4 pounds, and the whole, in nine months, 156 pounds." Epping butter has been long celebrated in the London market.

AMERICAN DAIRIES.

Algernon Roberts, owner of a farm of 280 acres, a few miles from Philadelphia, (the market for his butter,) had a dairy of 20 cows, whose average produce in butter, during 8 years (from 1796 to 1803) was, for each cow, 173 pounds a year.* These cows were undoubtedly of the native breed; but the cows in the vicinity of Philadelphia, were larger than the cows in general in New England.

In 1817, Abner Wheeler, of Framingham, (22 miles from Boston) at the request of the trustees of the Massachusetts Society of Agriculture, gave them a statement of the product of his dairy of 7 cows, in 6 months of 1817, commencing the latter part of May, and ending in November. The whole quantity of butter was 941 1-2 pounds, and of skim milk cheese, 1300 pounds; being nearly 5 1-4 pounds of butter, and 7 pounds of cheese, for each cow, per week. One of the 7 cows he mentioned as a small one, purchased the latter end of June, with her calf, and the calf being kept 3 1-2 weeks, the cow could not have contributed to the product of the dairy till after the middle of July.*

In the same number of the Repository in which the above statement is given, the trustees mention the information received of the common product of dairies in five other parts of the state, which averaged only 92 pounds of butter annually, and as much skim-milk cheese. But scarcely any butter and cheese are made, by our farmers in general, except during the pasturage season. These quantities are certainly small; but the common product of English cows, it is seen was for the most part only 112 pounds of butter per cow, and from some better dairies 140 pounds. And it should be considered that the English cows, in general, are much larger than ours, and fed in pastures vastly superior; so rich indeed, that two acres, one acre and a half, and very often one acre, are sufficient for a cow during the whole pasturage season. Whereas, in Massachusetts, at least in its eastern parts, I should think the common pastures do not yield a full bite for more than a month; and less and less as the season (perhaps most commonly a dry season) advances, until after the Indian corn harvest, when the mowing fields are opened for the after grass. Is there, indeed, any time from May to October, when, in addition to what they glean from our short, common pastures, our cows would not consume fine hay, sweet mown grass, or other green fodder, and Indian corn meal, or other meally food equivalent together, containing at least as much nourishing food as the whole of the thin short grass gathered by them in ranging over many acres, during nearly the whole day, to find it? And what is to be expected from cows which are thus, strictly speaking, but *half fed?* A certain quantity of food is necessary for a cow, to enable her to *hold her own*—to preserve her health, and keep up the flesh she already has on her bones; if she is also required to yield butter and cheese, she must have additional food to answer the demand. The effect of such additional feeding is strikingly exemplified in the case of Mr. Oakes' cow. In the first year, she had little more than the common pasture: in the second, her food was increased; in the third, still more: the product in butter increasing as the nourishing food was increased: and in the fourth year she was fed to the full, with the richest kinds of food, in addition to what she gathered at pasture, in which last year she gave three times as much butter as in the first year. Hence it may fairly be inferred, that our cows in general would yield at least double the quantity of butter and cheese usually obtained during the pasturage season, if they were full fed, even with green food alone, in the variety and abundance in which, by an improved husbandry, it might be provided; some good hay being given them, to prevent or correct too great looseness, when so fed. For besides that the succession of *dry* to *juicy* food must be grateful to the taste of the cow, and induce her to take in a greater quantity of food, it seems reasonable to suppose, that by duly checking the looseness, the food will be longer detained in the stomach and intestines, where it will be more perfectly digested, and consequently a greater proportion of it be converted to milk and flesh.

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* Memoirs of the Philadelphia Society for promoting Agriculture, vol. i. page 95.

* Massachusetts Agricultural Journal, vol. v. No. 1.

In the preceding examples, the American native cows, not especially selected, will bear a comparison with the English cows. But the following one, that of Mr. Caleb Oakes, of Danvers, surpasses all of which I have ever received information, in our own country; or in England, with the single exception which will be stated.

The history of the Danvers cow is given in No. 3, of volume 4, of the Massachusetts Agricultural Repository and Journal, which is published by the trustees of the State Society. As, perhaps, but a small number of the readers of the New England Farmer possess that Journal, I will repeat from it—That the cow was purchased out of a common drove of cattle, probably from New Hampshire—that she came into the possession of Mr. Oakes in April, 1813, being then five years old[†]—that in the first year, without any extra feeding, she yielded 180 pounds of butter—in 1814, when she had 10 or 12 bushels of Indian corn meal, 300 lbs—and in 1815, being allowed 30 or 35 bushels of meal, 400 lbs. of butter. In 1816, having been requested, by Mr. Derby, to keep a particular account of this year's product, in milk and butter, it was done, with close attention as to the butter, and occasionally to the milk;—that some time in June or July, she gave 10 quarts of milk at night, and 7 quarts in the morning, when the 17 quarts weighed 44 1-2 pounds. She calved the 5th of April, and her calf, remarkably fat and fine, was killed the 8th of May. During the time of suckling the calf, her surplus milk yielded 17 pounds of butter. Her butter from May 8th to December 20, being 32 1-2 weeks, was as follows:

	lbs.		*lbs.*		*lbs.*
May 15	14½	July 17	16	Oct. 2	16¾
22	16	21	16	15	15
28	17½	31	16	21	16
June 5	19	August 7	15	29	16
12	18½	14	15	Nov. 7	16
19	17	21	16	18	18
26	18	28	15	23	10
July 3	18	Sept. 4	15	30	13
10	17	11	16	Dec. 10	14
	—	18	12	20	10
		25	15		—
		—	—		467¼

Add the butter made while the calf was suckled, 17

Total, 484¼

To the above statement Mr. Derby added the following note: "Since Mr. Oakes has had the cow, she has suckled four calves, over four weeks each, and furnished about one quart of milk per day for the use of the family. I purchased of Mr. Oakes some of this year's butter, I think I never saw finer." The above statement, furnished to the trustees by Mr. Derby, is dated Dec. 25, 1816. At the end he added this note:—"Dec. 28, 1816; eight quarts of milk per day."

In a late conversation with Mr. Oakes, he informed me that the Indian corn meal given to his cow in 1816, was, in the whole, about one bushel a week; the greater part stirred into her skim-milk, morning and evening. Most of the butter-milk was also given to her. She was tied up in her stable every night, and he endeavoured to make her take as much liquid as possible, and therefore set before her at night a bucket of water with some meal in it, which was always found consumed in the morning. She was always healthy and hearty, and he fed her to the full. In the pasture, however, having always so much rich food in the stable, she was often lying down, while other cows were feeding. At one time he gave her potatoes, which increased her milk, but not her butter; and therefore he ceased giving them. In the autumn she ate about six bushels of carrots. On my saying, that the first time I saw her, I noticed the great extension of her bag formed under her belly, and the wide distances between her teats, Mr. Oakes remembered that her bag rose also high behind, and was the longest bag he had ever seen. The wide separation of the teats, is a natural indication of a large bag. To raise the more cream, from the same quantity of milk, that of his cow was set very shallow in the pans; of which, for that purpose, he purchased an extra number. Turning to Marshall s Rural Economy of Gloucester, I found the following observations. "The prevailing rule is, *to set the milk as shallow as it can be conveniently skimmed;* under the conviction that the shallower it is set, the more cream will rise from a given quantity of milk. An inch and an half is the ordinary depth; but in the practice I am more particularly registering, the dairy woman has the dexterity of finger to skim it at an inch deep. This, however, could not be done without the assistance of a *tin skimming dish.*" Mr. Oakes' cow was reputed to be "under size;" and the shortness of her legs gave her that appearance. But her body was long and deep behind. I think that, compared with our cows in general, her body was of the middle size.

Mr. Quincy purchased this cow of Mr. Oakes. I afterwards saw her on his farm, at pasture, together with a large cow of an English breed, descended, by a cross, from a celebrated English cow belonging to Mr. Stuart, the painter, and which Mr. Quincy had bought of John Welles, Esq. I then learned from Mr. Quincy, that the Oakes cow gave much more butter than the other, although the latter, as she appeared to me, was larger by at least one fourth part. Desirous of ascertaining their products in butter, I four years ago requested Mr. Quincy to give me the information. The following is an extract from his answer, dated February 6, 1821:

"My cow (that purchased of Mr. Welles,) was a large, stately cow: I gave a high price for her, as an excellent milker, and she did not disappoint my expectations. On the suggestion of Mr. Welles, who said, if fed with the same food she would yield as much butter as my Oakes cow, I put them, for one *fortnight*, upon precisely the same food, and kept an exact account of the butter made from each; the dairy woman keeping the milk and churning the butter separately. At the end of the fortnight, the cow I had from Mr. Welles had yielded *sixteen pounds* of butter—the Oakes cow *thirty-two pounds* and a few ounces." I could not continue the experiment longer, owing to the want of the milk of the Welles cow for other use; but I have no doubt that this is the fair permanent proportion.—The Oakes cow is only extraordinary for the *quality*, not the quantity of her milk. I calculate that the milk of cows, taken at an average, requires *twelve* quarts to a pound of butter. I have often known one pound made from *five* quarts of the milk of the Oakes cow."

The immense quantity of butter yielded by the Oakes cow, will naturally be ascribed to the extraordinary quantity of rich food she consumed; and I am willing to admit this, even to the amount of one half; but it was her first giving an extraordinary quantity of butter, on common *keep*,[*] that induced Mr. Oakes to pay her particular attention, and to feed her beyond the common practice. And the striking comparison just stated, with the large cow of English breed, *when both were fed in the same manner*, demonstrates that it was the nature of the animal, the signal faculty of converting her food to *rich* milk, which gave the superiority of two to one in favour of the American cow. Perhaps it may be imagined that the large cow, not having been accustomed to so much rich food, thence derived less advantage from it: this remark would be just, if she had refused, for any part of the time, to take that food; which I presume she did not, as Mr. Quincy gave no intimation of it.

One of the great recommendatory qualities of Bakewell's improved domestic animals, was their disposition to take on more flesh and fat than any other breed, in his time, from the same quantities of food. It is well known that such a disposition exists in the human race.

And, if I may be allowed to express an opinion in the case, this may arise from the stronger powers of digestion, in some individuals, by which their food is more perfectly dissolved or decomposed, and larger proportions of the parts suited to nourish the animals are extracted. But whatever may be the true solution of the question, the point interesting to the farmer is, to be well assured of the fact; and when any of his stock, (cattle, sheep or swine,) furnish proof of their possessing that important faculty, such animals ought to be cherished with superior care, and preserved for breeders.

SHEEP—No. 2.

Fifteen years have elapsed, Mr. Editor, since these remarks were published. Since that time very many changes bave occurred, and many opinions have changed. The ball of domestic economy, was then just started in its course; it now progresses rapidly to its goal. As for myself, I may have grown, indifferently, a little wiser by observation and experience, but have no reason to differ, very materially, from the sentiments expressed in that olden time.

The extract of a letter, was from the late Dr. Logan, of Pennsylvania—a gentleman, who, in advanced life, made a tour in England, with a view to judge, by personal inspection, of the state of manufactories in that country, and their adaptation to American purposes.

While we cannot but rejoice in the progress which our manufactories are making, the impulse they have given to industry, the employment of labour, their beneficial uses for home consumption, and the aid they afford to commercial enterprise—we should be aware of the abuses to which the system may be liable with us, as well as it has been in other countries; more especially when we reflect that avarice, and the desire of gain, so often shut up all other avenues to the human heart, by causing a belief that the end will always justify the means, in the accumulation of inordinate wealth.

The great manufacturing establishments of Europe, are so many petty tyrannies—where an individual often wields the destinies of thousands of his fellow men, and their dependent families, who await his nod for employment, for bread, for existence—and these works themselves are often dependent on the caprice of fashion, or folly. Witness the introduction of shoe strings in England, which for a time ruined the buckle makers of Birmingham—and the English Sovereign having asked, "what shall I do to quiet the clamour of these fellows, and their starving families?" was answered—*put buckles on your shoes.*

Surely, it is yet a good while before we can arrive at such a state of things, and have our citizens locked[*] up and fed in the factories, that some unwieldy capitalist may add another plum to the two or three already made. I guess that it would not suit our northern folks, to be cased in this way, and fed by a keeper. They have no lack of industry, and are no wise indisposed to gain; but they have still a spice left of the moral feeling of their pilgrim ancestors, and would therefore choose to have time to rest, perhaps to think, and to let their young people work a little in their gardens, from which have been raised* vegetables enough to build a church; and it is better to build a church by good, old fashioned industry and piety, than that excessive labour should enable some huge monopolist to build a palace.

[†] Mr. Oakes is now satisfied that she was but four years old, she then having her second calf.

[*] This word *keep*, now in common use among English agricultural writers, comprehends all the kinds of food given to cattle.

[*] See account of manufacturers, in England, being locked up and fed gratis, to save the time necessary to go home and eat their meals with their families, and in that order and decency common to civilized nations.—We Southerners, though we are poor, will have our jokes, and beg leave to recommend to "merry England" the "world's last hope," an improvement on this lock-

With us to the south, manufactories must always be on a limited scale. The drowsy nature of our sable labourers, unfit them for works where machinery is employed—even the harsh music of the engines would form a lullaby, from which they would probably be aroused by the taking off of an arm, or some such thing. They make famous cyclops, or iron workers, and the bowels of Mount Ætna would not be too hot for them.

Domestic manufactures, in their strictest sense—that is, manufactures in families, are all important, and adapted to the south. Such was the opinion of Mr Jefferson, expressed when I had the honour to present him with the first premium fabric exhibited at the Arlington sheep shearing of 1806, and which was worn on the day of independence of that year. His idea was, that only those who were unfitted for agricultural purposes, could be spared to manufactures in the south—and that our southern manufactures should be especially for domestic consumption.

I recollect when the habit was, to buy for the winter clothing of the slaves, an article called negro cotton; a miserable fabric formed out of the sweepings of the European manufactories, and comprising all the trash, which could be appropriated to no other purpose. This wretched apology for clothing soon became a thing of "shreds and patches," and after a very little wearing, you might study anatomy through it. Thousands of slaves were rendered cripples, from colds, pains in the limbs, and premature infirmities, brought on by giving to the natives of a climate situated under the line, a clothing so little suited to withstand the severities of a North American winter.

Had manufactures of a domestic character prevailed in the south 30 or 40 years ago, so many fine estates would not have changed hands, or rather have gone out of the hands of the hospitable fellows of the good old times, whose bones have been sold, and their children scattered in distant lands. Dealing in figures has been the prime cause. No matter what may be the prices of south country produce—say cotton at 30 cents, or tobacco at $30, unless there is household thrift, the proprietor goes down. Dealing in figures, to a southron, is like placing him under high steam pressure; he drives on at a great rate for a while, but his boiler bursts in the end. I could, in proof, point my finger to a very worthy Maryland gentleman, who exceeds an hundred hogsheads of very good tobacco per year, yet he wishes to remove to cotton and sugar lands, because he is always in debt—or to as worthy a Virginian, who has tolled in the mill ten thousand bushels of wheat in the year, yet he has hung up his fiddle—not in the general acceptation of the phrase, which means that he has played enough, but rather because it is so out of tune, that he can play no more. I can come nearer home, my dear sir, and speak feelingly on this subject, and willingly publish my experience for the benefit of others. I should have had some money, having extensive and highly productive estates, and they capitally managed, (by my stewards,) if these stewards had not *dealt in figures* too much, in former times. We "order things" better now, and manufacture from 3 to 4,000 yards of excellent woollen and cotton clothing, shirting, &c.; we also tan leather, (upper leather,) and make within ourselves various articles for farming uses. Groceries, salt, iron, medicines, and scythes, we must buy—if we grow the rest, and beware of figures, I feel confident that I shall soon find my purse in fast recovery from a very long consumption.

Respectfully, yours,
GEORGE W. P. CUSTIS.

Arlington House, 14th May.

MERINO SHEEP.

First published in 1810.

The late importations of Merino Sheep having created considerable interest among the farmers of the United States, it may not be amiss for us to inquire into the degree of esteem, in which these animals may be held abroad. The following is the extract of a letter from an American gentleman, of considerable celebrity in the agricultural world, who has lately returned from a visit to England. The letter is addressed to Mr. Custis, of Arlington, and bears date 20th December, 1810:

"Notwithstanding the present rage for Merino Sheep, with *you*, I have my doubts how far the pure Merino is the best breed for our country. Even in England, many of their most eminent agriculturists are not satisfied of the advantage to their country, of confining their stock to that breed. Dr. Parry, of Bath, has a flock he thinks so far improved, by crossing the Merino with the Ryeland, that he would not permit a pure Merino ram to be in his flock for one thousand guineas. Mr. Coke, the best and most extensive agriculturist in England, is crossing the Merino with the South Down, greatly to his satisfaction. I have been for a few years crossing the Merino with the Bakewell. A young ram sold from my flock the last year, has shorn eleven and an half pounds. The only advantage of Merino is the fineness of wool; in quantity, staple, and carcass, it is inferior to some other breeds we might propagate to the advantage of our country. I wish you to make an experiment with a pure Merino ram and some of your best Smith's island ewes.

"However friendly I am to domestic manufactures, I am totally opposed to the mad scheme of *forcing manufactures by heavy duties*, giving rise to great manufacturing establishments, supported by wealthy individuals, and tending to destroy the physical, moral and political character of the labourer. The great manufacturing towns are sinks of corruption, misery and wretchedness: such is the experience of all the world, under whatever government."

Note to the above by Mr. Custis.

The importation of Merinos may prove a real and important benefit to American economy, if the practice of Dr. Parry, Mr. Coke, and other distinguished breeders, is promptly followed in the United States. To preserve the Merino race entire, would be at once unwise, impolitic, and in many respects injurious. We have many useful native breeds, which, by crossing with these valued strangers, would imbibe a sufficiency of their superior qualities to answer every necessary and ordinary purpose. At the same time, this system would rescue the native sheep from unmerited neglect, and disperse the Merino strain through all parts of our country. Again, cloths made of the pure Merino wool, are only suited to the uses of the rich and luxurious. Their costly nature precludes their introduction to the humbler walks of life; and although the man of fortune may indulge in the comforts of warm clothing, flannels and night-caps, his poorer neighbour will still be shivering in the horrors of nakedness and neglect.

If manufactures are wanting, they are especially wanting to the needy and distressed; a blanket is more useful than a shawl, a strong cloth more extensively useful than a fine one. To encourage domestic establishments in parishes and townships, and to discourage extensive monopolies, should form the essential policy of our country at this time. When we may become an *exporting* community, it may be desirable to fashion our fabrics to the taste of luxury abroad—but let not this notable attribute of independence, be converted to other than the benevolent uses of the republic. Minister to the comforts of that large and useful class of our political family who support the cause of industry in peace, and protect the cause of freedom in war—who deserve the due attention of science and patriotism, to supply their real wants, and whose claims to public and private protection are of the most virtuous cast.

The great preference given to imported Sheep, discourages the small farmer from improving his native breeds. He says, that imported sheep, like imported horses, are only for the uses of the rich—that the "high mettled" racer will not descend to the walks of agricultural employment, nor will Merino cloth descend to comfort the labourer's body. To introduce a proper admixture of the fine with the coarser woolled sheep, will tend to equalize the price, and bring it more within the compass of farmers in general. It were better to see every farmer's *little* territory, spotted with a few sheep, than to see the cabannas of a Merino nabob extending far and wide. *I too am a Merino man*—but I well know that many beneficial systems of human affairs have their abuses, nor do I believe the Merino system to be exempt. To see the labourer comfortable, and his children no longer naked, should form the pious wish of every true friend of humanity, or his country. By intermixing the valuable qualities of Merino sheep with the native breeds at large, the material which forms the heart of manufacture, will spread its genial current through the veins and arteries of the agricultural body, and give life and vigour to the best interests of the nation.

AGRICULTURAL CORRESPONDENCE.

Extracts from letters addressed to W. M. Barton, Esq. *Vice President of the Agricultural Society of the Valley, Va. by the Hon.* Jesse Buel, *of Albany.*

Dear Sir, *Albany, Nov. 8, 1822.*

"My turnips, which you saw growing, exceeded my fondest hopes. The white and green tops gave at the rate of 760 bushels the acre; and the ruta baga, sown broadcast upon a clover lay, after the grass was mown, gave about 500 bushels. These roots were not so large, but more fair, than those raised in drills. I had between six and seven acres, all a second crop. It is the first experiment I have heard of raising the Swedish as a second crop; and it succeeded so well, that hereafter I intend to raise them altogether after clover.

"I think the culture of this root might be successfully introduced in the Valley upon light soils. You should not sow the flat kinds till the 10th or 15th August, nor the Swedes till about the 15th or 20th of July. I think they would then escape the fly—as I have never known this insect to disturb crops here sown after the 28th July. Make an experiment upon my plan, that is, sow the flat sorts on

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up system, viz: to lock the weavers to their looms, and have them fed by persons going round with food ready rolled up in balls, and cramming them as we do turkies. By this mode a great saving will accrue, inasmuch as in the usual way some time is taken up in carrying the victuals to the mouth, and then in wagging the jaws; by the improved mode, the manual operation will all be spared to the loom, and the food could be bolted.

[*] In Connecticut, onions enough were sold from the gardens of a village, (which gardens were tended exclusively by girls,) to pay for building a meeting-house. Pity to lock up such fine damsels as these, in the poisonous atmosphere of crowded manufactories.

your stubble ground, and the others upon a clover sod. You will find them valuable for cattle."

Dear Sir, *Albany, Dec.* 6, 1823.

"Do you recollect seeing in the American Farmer of February last, my report in the house of assembly, on the project of an Agricultural School? I beg of you to give it a perusal, as you without doubt preserve the file, and view it in its different bearings upon the fiscal, moral and political interests of our country. The study which I have given the subject has convinced me that it is one of the deepest interest; and I could add many and weighty considerations in its favour, suggested since I made the report; but it is doubtful whether the public mind is in a temper to listen to, or to be persuaded by them. I consider the plan suggested by the Albemarle Society as defective, inasmuch as it makes agriculture an *auxiliary* study. It ought to be the *principal*, and botany, chemistry, polite literature, &c. made subservient to this great study. The pupil should go to it with the express view of learning to be a farmer, and should be taught so much science, blended with experimental and practical knowledge, as should best promote this primary end. Of what vast importance would a well conducted experimental farm, connected with such an institution, soon become to the agricultural interest, and to the Union at large. The fact is self evident, that under the *best* management, our farms might be made to double, treble, and quadruple their ordinary products. What method so likely to produce this result, as that which I suggest? A botanic garden, among other important advantages, would make us acquainted with our native grasses, and those of value from abroad; and instruct in the best method of mixing and cultivating them. The labours of the Horticultural Society of London have, in a short time, produced a striking improvement in that branch of rural economy; and its agents have already visited every quarter of the globe, and drawn from them every thing valuable in the vegetable kingdom."

CHEAP METHOD OF FATTENING CATTLE.

Communicated by Mr. Nathan Landon, of Lichfield, Connecticut.

There is a way to fatten cattle, in the absence of the common means, scarcely inferior to the best, as the following instances will prove. I fatted an ox and a three years old heifer, the winter past, without either corn or potatoes, for less expense than even that of common keeping, by a preparation of cut straw, &c. as follows: I boiled about two quarts of flaxseed, sprinkled it on cut straw, which had been previously scalded and seasoned with salt, together with some oil-cake and oat meal, working them together in a tub with a short pitchfork, till the whole became an oily mush. I fatted the heifer first. She was of the common size, and in good order to winter. I gave her about three pecks; which she ate voraciously; and in the course of four days, when the seed was gone, she was visibly altered. I fed her regularly in this way about two months, in which time she had eaten about one hundred bushels of boiled flax-seed with other ingredients in proportion. When she was butchered, she weighed 584 pounds, 84 pounds of which was tallow. She would not have sold, before fattening, for more than sixteen dollars.—I sold two quarters of her for $18.13. She cost me not more than $10, exclusive of the hay she ate, which was chiefly scalded as the above. On the first of February I began with the ox. I fed him about three months, but not altogether as well as I did the heifer. He digested about one pint of boiled flax-seed a day, prepared as above, which I suppose formed half the fat in these two cattle. The ox was short, measured 7 feet 2 inches, and when killed weighed 1082 lbs. had 180 lbs. of tallow. He cost me, while fattening, 25 cents a day. He had previously cost me 35. My nett gain in fattening these two cattle, was more than I have cleared before in fattening oxen and cows, in 15 years, and this is owing, I think, chiefly to the use of flax-seed. I never fattened cattle that appeared so calm, so hearty, and digested all their fare with so much natural ease and regularity as these. I would therefore recommend the above preparation to the attention of farmers as a good substitute for corn. I kept my cows on it altogether during March for one-third the expense of hay. It makes rich milk and excellent butter. Farmers! by a proper attention to economy, one half of your corn may be saved, to produce abundance in the land, and your garners shall overflow with oil and fatness. I shall pursue this method of feeding, and endeavour to improve it, and I trust I shall be enabled to say, the half has not been told.

TO DESTROY DOCKWEED.

Brook Hall, Washington county, Va.,
To the Editor. *May* 14, 1825.

In one of your numbers, some time ago, I discovered an inquiry by a Tennessean, wishing information how to destroy the weed called dock; and not seeing any information given through your paper, I have concluded to answer the query. I have found the best method to destroy that troublesome weed, is not to cut them nor dig them up; but let them stand and seed, and let the stalk stand without interruption; and in the course of three years they will disappear. I have proven this method for fourteen years, and believe it to be an effectual manner to get rid of them. When I first discovered it, I was much plagued with that weed; and since, I am but little interfered with, unless it is in places where the wash of roads, or something like that. It was an accident that I made the discovery, by a thick patch being left in one of my meadows, one year, without my knowledge, and the next year finding it to be much less; I then left them in that spot the next year, and in three years they had disappeared, and was covered with a fine coat of grass.

WM. BYARS.

HORTICULTURE.

CULTURE OF THE GRAPE.

State of Delaware, May 21st, 1825.

Sir,

As there must be a considerable mass of knowledge in the possession of intelligent foreigners in this country, as to the best practice of raising vineyards, I have thought that I would ask of them a few questions on the subject through the medium of your paper; answers to which would be, no doubt, useful to many persons who have planted, or who intend to plant vines.

Do you know of any other mode of rearing vineyards, in Europe or elsewhere, than by slips or cuttings? Are not all the vines therein more or less crossed or mixed from the blossom? Will the seed of those vines produce like from like, or will they produce varieties, some few good, but mostly bad or indifferent? It must be conceded, that by raising vines from the seed, they can be raised of as good a quality as ever were in possession of man; but these, it is presumed, are only to be obtained by dint of perseverance in the cultivation, and after a number of years have elapsed before the quality can be ascertained.

It has been observed by Dr. Henderson, of London, in his history of ancient and modern wines—"in vain we look for the Falernum, the Cœcubum, or the Rhœtecum: they have disappeared from the soil and live only in song;" they have been lost, no doubt, from the confusion and havoc occasioned by the irruption of barbarians into the then most civilized nations of the earth.

To obtain as good vines as these, can only be done by rearing from the seed, unless those we have already are as good, and they can be raised from the cuttings.

In my communication, dated 9th of last month, inserted in your paper, I stated that only one-fifth of grape bearing vines could be raised from any given quantity of seed sown. I committed this error from defect of memory, as I should have said about one half from any given quantity of seed sown.

Besides the foregoing queries, I would ask intelligent agriculturists and men of science among us, whether there has been any thing written in the books on the subject of the vine, from the days of Virgil to the present day, prescribing that the vines for a vineyard should be raised from the seed in preference to the cuttings from a thrifty vine of good quality? As it is believed to be a fact, that a red grape vine has so far conquered a white grape, planted a few yards from the red, as to have changed its colour to a full red, is it not a rational conclusion, if a thrifty grape vine of excellent quality, would impart colour to a vine inferior in its different qualities, that it would also give superior quality as to the liquor of the grape, as well as a greater durability to the wood? The writer of these queries is a farmer anxious to diversify employment by the cultivation of the vine, as he is satisfied, that to diversify occupation would be not only more profitable to himself and others engaged like him, but that it would be the more profitable to those who continued in the more usual modes of farming, especially if the planting of vines should become general among our farmers. It would create a new staple in the products of our constantly increasing and already preponderating agricultural population, and consequently better prices would be given for what remained of our usual products, as less would be raised for sale.

There ought to be no hesitation as to planting vineyards in this country, as it is evident that our soil and climate are admirably suited for vines, from their naturally springing up within a few hundred yards of every farmer's door; and as thousands of these vines yield fruit in abundance, it only remains for their industry to gather them and to make wine; the worst of which would be more wholesome than the liquors generally consumed. Many persons believe that wine is a distilled liquor;—this was my opinion; but the fact is, it is but the juice of the grape, or what is more technically called *must*. From this must, when somewhat tart, is made brandy; in a similar manner to the making of apple or peach brandy from apple or peach liquer.

The generality of our farmers are much in the dark as to this interesting subject; and he that would elucidate it so as to point out what is most proper to be done to raise good vineyards would merit the thanks of a grateful community.

Very respectfully,
J. S. Skinner, Esq. J———

[We have a treatise on the culture of the vine, translated from a recent French work, with which, if we are not much mistaken, our readers will be much gratified and edified. We have put it on file, to be published as autumn approaches, that it may be then fresh in the recollection of those who are led by good judgment, as well as good taste, to cultivate the grape. We are *promised* a treatise on the making of wine, which it is said may be easily understood and put in practice in this country—but the gentleman who promised it, acts on the reverse of Poor Richard's maxim: "Never put off until to-morrow what you can do to-day—one to-day is worth two to-morrows."

We take this opportunity to recommend that every farmer gather grapes from all the vines growing spontaneously in his fields, and mark those which yield the sweetest and finest fruit. These he can trim and nourish into greater productiveness, and from cuttings propagate enough to make, in a few years, with little trouble and expense, a delightful beverage, far more palatable and wholesome than *still-burnt, or even pure whiskey;* with this excellent quality to recommend it, that it will be a more *sociable* drink—for his children may innocently and healthfully partake of it—and his wife may join in a glass to his good health, and treat *her* friends, too, to a taste of the innocent and unadulterated juice of the native grape.

P. S. We have correspondents who can, and we are sure will answer to the queries of J.]

RURAL ECONOMY.

ON THE GENERAL NATURE AND ADVANTAGES OF WHEELS AND SPRINGS

For Carriages, the Draft of Cattle, and the Form of Roads.

By Davies Gilbert, Esq., F. R. S., &c.

Taking wheels completely in the abstract, they must be considered as answering two different purposes.

First, they transfer the friction which would take place between a sliding body and the comparatively rough, uneven surface over which it slides, to the smooth oiled peripheries of the axis and box, where the absolute quantity of the friction as opposing resistance is also diminished by leverage, in the proportion of the wheel to that of the axis.

Secondly, they procure mechanical advantage for overcoming obstacles in proportion to the square roots of their diameters when the obstacles are relatively small, by increasing the time in that ratio, during which the wheel ascends: and they pass over small transverse ruts, hollows, or pits, with an absolute advantage of not sinking, proportionate to their diameters, and with a mechanical one as before, proportionate to the square roots of their diameters.

Consequently, wheels thus considered, cannot be too large: in practice, however, they are limited by weight, by expense, and by convenience.

With reference to the preservation of roads, wheels should be made wide, and so constructed as to allow of the whole breadth bearing at once; and every portion in contact with the ground should roll on it without the least dragging or slide: but, it is evident from the well known properties of the cycloid, that the above conditions cannot unite unless the roads are perfectly hard, smooth, and flat; and, unless the felloes of the wheels, with their tires, are accurately portions of a cylinder. These forms, therefore, of roads and of wheels, are the models towards which they should always approximate.

Roads were heretofore made with a transverse curvature to throw off water, and in that case it seems evident that the peripheries of the wheels should in their transverse sections become tangents to this curve, from whence arose the necessity for dishing wheels, and for bending the axes; which contrivances gave some incidental advantage for turning, for protecting the nave, and by affording room for increased stowage above. But recent experience having proved that the curved form of roads is wholly inadequate for obtaining the end proposed, since the smallest rut intercepts the lateral flow of the water; and, that the barrel-shape confines carriages to the middle of the way, and thereby occasions these very ruts,—roads are now laid flat, carriages drive indifferently over every part, the wear is uniform, and not even the appearance of a longitudinal furrow is to be seen. It may, therefore, confidently be hoped that wheels approaching to the cylindrical form will soon find their way into general use.

The line of traction is mechanically best disposed when it lies exactly parallel to the direction of motion, and its power is diminished at any inclination of that line in the proportions of the cosine of the angle to the radius. When obstacles frequently occur, it had better, perhaps, receive a small inclination upwards, for the purpose of acting with most advantage when those are to be overcome. But it is probable that different animals exert their strengths most advantageously in different directions, and therefore practice alone can determine what precise inclination of this line is best adapted to horses, and what to oxen. These considerations are, however, only applicable to cattle drawing immediately at the carriage; and the convenience of this draft as connected with the insertion of the line of traction, which continued, ought to pass through the axis of the wheels, introduces another limit to their size.

Springs were, in all likelihood, applied at first to carriages, with no other view than to accommodate travellers. They have since been found to answer several important ends.

They convert all percussion into mere increase of pressure—that is, the collision of two hard bodies is changed by the interposition of one that is elastic, into a mere accession of weight. Thus the carriage is preserved from injury, and the materials of the road are not broken: and, in surmounting obstacles, instead of the whole carriage with its load being lifted over, the springs allow the wheels to rise, while the weights suspended upon them are scarcely moved from their horizontal level. So that, if the whole of the weight could be supported on the springs, and all the other parts supposed to be devoid of inertia, while the springs themselves were very long, and extremely flexible, this consequence would clearly follow, however much it may wear the appearance of a paradox; that such a carriage may be drawn over a road abounding in small obstacles without agitation, and without any material addition being made to the moving power or draft. It seems, therefore, probable that, under certain modifications of form and material, springs may be applied with advantage to the very heaviest wagons; and consequently, if any fiscal regulations exist either in regard to the public revenue or to local taxation, tending to discourage the use of springs, they should forthwith be removed.

Although the smoothness of roads and the application of springs are beneficial to all carriages and to all rates of travelling, yet they are eminently so in cases of swift conveyance, since obstacles when springs are not interposed, require an additional force to surmount them beyond the regular draft, equal to the weight of the load multiplied by the sine of the angle intercepted on the periphery of the wheel between the points in contact with the ground and with the obstacle, and therefore proportionate to the square of its height: and a still further force, many times greater than the former when the velocity is considerable, to overcome the inertia, and this increases with the height of the obstacle, and with the rapidity of the motion, both squared. But, when springs are used, this latter part, by far the most important, almost entirely disappears, and their beneficial effects in obviating the injuries of percussion are proportionate also to the velocities squared.

The advantages consequent to the draft from suspending heavy baggage on the springs, were first generally perceived about 40 years since on the introduction of mail coaches; then baskets and boots were removed, and their contents were heaped on the top of the carriage. The accidental circumstance, however, of the height being thus placed at a considerable elevation, gave occasion to a prejudice, the cause of innumerable accidents, and which has not, up to the present time, entirely lost its influence; yet, a moment's consideration must be sufficient to convince any one, that when the body of a carriage is attached to certain given points, no other effect can possibly be produced by raising or by depressing the weights within it, than to create a greater or less tendency to overturn.

The extensive use of wagons suspended on springs, for conveying heavy articles, introduced within these two or three last years, will form an epoch in the history of internal land communication, not much inferior, perhaps, in importance, to that when mail coaches were first adopted; and the extension of vans in so short a time to places the most remote from the metropolis, induces a hope and expectation, that as roads improve, the means of preserving them will improve also, possibly in an equal degree, so that permanence and consequent cheapness, in addition to facility of conveyance, will be distinguished features of the M'Adam system. [*Journal of Science.*

INTERNAL IMPROVEMENTS.

RAIL-WAYS, CANALS, ROADS, &c.

No. 4.

It is now proposed to exhibit the application of the principles developed in the preceding essays, to the state of Pennsylvania.

To connect the eastern and western divisions of our country by some magnificent monument of public enterprise, is at the present moment in serious agitation. Nearly half a century has rolled away, since the plan for connecting the great vallies of the Mississippi and St. Lawrence, with the vallies of the Susquehanna and Delaware, was first devised by the gigantic intellect of those statesmen, to the wisdom of whose measures we are indebted for the benefits we are at the present moment so abundantly enjoying. About five-and-thirty years have elapsed since the first *canal from the Atlantic ocean to lake Erie, was commenced in Pennsylvania.**

The two first sections are now, after surmounting innumerable obstacles, nearly completed. The two remaining divisions are yet to be accomplished.—To continue the work now depends on the wisdom of an enlightened people. Meetings have been held in various districts of this commonwealth, to contribute to the accomplishment of this magnificent undertaking; and the voice of approbation from the people has rung through the vallies and plains of Pennsylvania, from Philadelphia to Pittsburg, and from York to Tioga. This was to have been expected from the state, whose enterprising citizens, at a far distant period, led the way in the grand system of internal improvements, and accomplished works of gigantic magnitude, long ere the attention of any of her sister states was attracted to the subject.

A state which, at the present period, offers to the eye of the traveller the noblest turnpikes in America, and bridges unrivalled in magnitude and scientific boldness of design; and which is modestly pursuing the noiseless, even tenor of her way, has expended in conjunction with her citizens, upwards of TWENTY-FIVE MILLIONS OF DOLLARS† for internal improvements, independently of the vast sums devoted to similar objects by the counties: *an amount unequalled by any state in the Union, however ostentatious.* But no single work, to concentrate the attention, and to diffuse its blessings impartially to all her citizens, similar to the Western Canal of New York, presents itself in Pennsylvania. Nearly all our works are local, and consequently partial in their operation. The period has now arrived to remove this reproach. Pennsylvania may execute the first grand railway in the new world. The people have determined that a great public communication shall be effected between the east and the west. They have willed it, and it must be executed. The period has passed away when prejudice, ignorance, and interest opposed its progress. The mound has been prostrated, and the deluge of information, boundless in quantity, and irresistible in force, is fast sweeping away the last vestiges of opposition. Let us, therefore, seize on the present moment. The works already constructed by our ancestors for our benefit, demand the payment of the debt of gratitude which we have incurred, in the only manner in our power, to our posterity.—The works we ourselves have achieved demand the continuance of our efforts, without relaxation, to preserve the reputation so laboriously acquired. Surveys, by *scientific, practical, and disinterested engineers,* should be *immediately* commenced; all the information on this subject in Europe should be procured, digested, and cautiously examined. If, on mature deliberation, a canal or railway be recommended,[*] all the zeal, patriotism and intelligence of the state, will be called into action, to bestow the most cordial co-operation for its accomplishment. The endeavour to impress on the minds of our citizens the benefits resulting from this work is perhaps unnecessary.

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*The Susquehanna and Schuylkill, and Schuylkill and Delaware Canals, the two first links in this great chain, were for some time prosecuted with vigour, and $500,000 expended. These works, with the Delaware and Chesapeake Canal, unfortunately were suspended, but are now in rapid progress, or *nearly* completed, at an expense of about 4,00 ,000 of dollars.

†About two-thirds of this sum have been expended in improving our inland navigation, on roads and bridges, &c.; the remaining third has been expended

The blessings of Providence have been eminently bestowed on our commonwealth—we enjoy a climate remarkably favourable to health—the fertility of our soil is unequalled by any state on the Atlan

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chiefly for the advancement of science, literature and the arts, objects of the first magnitude in the scale of internal improvements These expenses have been defrayed in the majority of instances, by individuals, the State occasionally contributing a liberal portion. The policy of this plan will be apparent to all who reflect on the abuses usually practised in the expenditure of the public revenue.

In the above large sum, the expenditures for the county schools, and for charity, are not included. These sums it is difficult to estimate, but they are known to be enormous. (The sum annually expended in charity in Philadelphia alone, is nearly $600,000! an amount unequalled by any city, not the capital of a kingdom, in Christendom.) Documents in the possession of the writer of this sketch, confirm these statements beyond the possibility of doubt.—See also Journal of the Senate of Pennsylvania for 1821; also State Laws. Does this countenance the obloquy and slander, incessantly repeated, that Pennsylvania is dead to enterprise?

The State is under great obligations to the American Philosophical Society, whose essays and surveys, effected with great expense, contributed to produce this spirit for internal improvement, of which Pennsylvania exhibits so many monuments. The Society recently established in this city, to promote one of the departments of internal improvement, viz. the construction of canals, roads, bridges, and other similar objects; have distributed many pamphlets relating to those subjects, and have commenced a correspondence with the most influential citizens in the Union.

Several of the meetings of citizens, held in this state, which have passed resolutions approving of the junction of the eastern and western waters of Pennsylvania, have been convened by the exertions of this society, whose laudable zeal deserves commendation.

[*] A brief comparison of the relative advantages of a railway or canal from Pittsburg to Philadelphia, will now be presented; referring to the preceding essays for more general and detailed statements.

Three routes for canals have been surveyed—the northern, middle, and southern. The lockage on each of these routes is enormous, and expensive aqueducts and tunnels will be indispensable.

The route for the northern canal by the west branch of the Susquehanna *is very circuitous*—the surveys have not been made with sufficient accuracy to determine the amount of lockage, but is presumed that it is *nearly 4,000 feet*—it is also supposed that a tunnel will be necessary. The country is also comparatively uninhabited.

The southern route pursues the same course to Harrisburg, but from thence traverses the valley of the Conedoguinit and Conecocheauque to the Potomac, (an accurate survey of this portion of the route is not in existence, but the lockage will be considerable,) from thence to Pittsburg, the Potomac and Ohio canal will constitute the residue. This route is also very circuitous; the lockage on the latter portion only, will be about 3,837 feet, in addition to the lockage between the Potomac, Susquehanna and the Delaware; the expense of this route (including a long and difficult tunnel, and numerous aqueducts, which will require many years to execute,) will be enormous.

The middle route pursues the same course to the Susquehanna with the two former—from thence the Juniata, Conemaugh and Alleghany rivers will constitute the remaining portion of this route; it is the shortest, and it is probable that it can be executed at the least expense— this point, however, is still uncertain.) The lockage will be about 3,358 feet; a long and expensive tunnel will be indispensable. The canal will require five years for its execution, and the tunnel will require five years in addition.

1st. The expense of the canal on this route, although less than on either of the preceding, will be (including the tunnels and aqueducts,) at least 4,000,000 dollars, and will probably amount to double that sum. The expense of constructing the New York canal, through a far more favourable district, where the lockage is about a fifth only of the above amount, where the length is much less, and no tunnels required, will be about $7,500,000. The length will be 379 miles.

2d The canals will be obstructed by ice, about four months in every year, (the New York canal is navigable only 220 days in each year,) the very elevated country through which they must pass, will probably more than balance their more southern latitude; accidents from the bursting of banks and other injuries to the canal, will probably shorten the period of navigation, (these accidents continually occur on the New York canals.)

3d. The time which will be required merely to pass through the locks, (4,000 feet,) under the most favourable circumstances, will be 66 hours and 40 minutes; but from causes, stated in the previous essay, 80 hours will probably be required. The portion occupied by the canal will require 152 hours in addition, or 29 days and 2 hours for the total time required to navigate 379 miles of canal from Pittsburg to Philadelphia, if the same horses be employed for the whole distance—or 10 days and 20 hours, if relays of horses are provided. (See the previous essays.)

4th. The numerous attendants required to superintend the locks, will require large sums to be expended for their salaries.

5th. *The tolls on the canal* (for reasons which will be presently mentioned,) *will be at least double those required on a railway.*

6th. The other expenses of transportation will be more than double, in addition to the tolls, (see the previous essay, where the expense of transporting 100 tons for one hundred miles, exclusive of tolls, and the time required to pass the locks,) is stated to be 32 to $40 on a canal, and $20 on a railway; or if relays of horses be employed, 22.50 to $27.75; if the lockage be added, the expense will be from 33 to $40.75 on a canal, and $18.75 on a railway.

The following statement will exhibit a comparison between railways and canals in the above six instances:

1st. No *correct surveys*, made in reference to the construction of a railway from Pittsburg to Philadelphia, exist: therefore any calculation of the expense, *pretending to accuracy*, will be at once presumptuous, vague and unsatisfactory.

But from the data already in our possession, we are authorized, without incurring the above imputation, to assume the sum of $3,000,000, as *the probable estimate* for constructing an edge railway of 390 miles in extent, composed of two sets of tracks for the going and returning trade, (these tracks are calculated for horses as moving power, and may be constructed for about one third of the expense required for the double tracks, furnished with cogs, and constructed for the passage of locomotive steam engines.)

In this railway three parallel ranges of props or piers will be sufficient to support the two roads—the middle pier of course sustaining two bars. In this state, these piers can be constructed of wood, (which by a peculiar preparation, will not decay for many years.) No tunnel will be necessary, and the bridges over the Susquehanna, now in existence, will be sufficient to support the railway—the canals will require tunnels and expensive aqueducts.

2d. *The railway can be used at all seasons*—even snow offers no obstruction, as a small scraper, attached to the foremost carriage, removes every obstacle from the narrow surface of the edge railway.

3d As the ascents are balanced by the descents on railways, *little delay is occasioned by the inequalities of the surface of the country*—even the Alleghany mountain is scarcely an obstacle; (see the preceding essay.) If relays of horses be employed, merchandize can be transported from Pittsburg to Philadelphia, in about four days and four hours (less time than will be required merely to pass the locks of the proposed canal.) The total time on the canal will be 10 days and 20 hours.

4th. The expense for salaries will be very inconsiderable on a railway, as a few collectors of tolls only will be required.

5th. As this railway *can be executed in half the time and for half the expense of the proposed canal*, and as the repairs of the railway will be inconsiderable—the tolls on an equal amount of tonnage may be reduced 50 per cent. on the railway: (compared with the tolls which must be charged on a canal,) and yield the same interest on the capital expended in constructing it; but for the reasons assigned above, and for those in the previous essays—the tonnage which will be transported on the railway, will be greater in amount, than if a canal be employed; the tolls (*which depend on the quantum of transportation,*) may be still further reduced per ton.

6th. The labour and consequently expense of transportation on the railway, has been demonstrated to be much less than on the canal, and many other *advantages of railways have been stated in the preceding essays.*

Some reasons will now be offered to prove that locomotive steam engines will not be beneficial in Pennsylvania; and that they can be used advantageously only in very populous countries; and where several other circumstances are favourable.

1st. We have shown in the previous essay, that when the cost of coal is 10 cents per bushel, and the labour of men 75 cents per day, that the expense of transporting 100 tons by a locomotive steam engine, on a railway constructed for the purpose, (exclusive of tolls,) is 15 dollars per 100 miles, or 15 cents per mile. To ascertain the amount which must be charged per ton; if the tolls are intended to be sufficient merely to yield an interest on the capital required to construct and maintain a railway of the above description in repairs, it will be necessary, 1st, to state the expense of construction and repairs of that railway; and 2d, to ascertain the amount of tonnage which will be transported. 1st, the expense of a railway of this description will be 100 to 200 per cent greater than those usually adopted, viz the expense of the road to Pittsburg will be 6 to 9,000,000 of dollars! If, therefore, the sum of 7,500,000 of dollars be required, the tolls must be 50 per cent. greater than when the railway costs only $3,000,000, (the estimate when horse power is employed.)

2d. The tonnage which will be annually transported between Philadelphia and the western country, whenever the railway shall be completed, has been estimated at 500,000 tons. (The reasons for this estimate are presented in the above essay,) if, therefore, the toll on each ton amount to one-third of a cent per mile—the amount will be 500,000 dollars for 300 miles; a sum sufficient to yield an interest of 5 per cent. viz. 375,000 dollars, and yield 125,000 to maintain the railway in repair.

The tolls on the above 100 tons will be $33.33 per 100 miles, and the cost of transportation $15 only; (see the preceding essay;) viz. the tolls are more than double the other expenses of conveyance—the total expense is therefore $48.33⅓, for the transportatic[*]—and never failing streams meander through every portion of our territory, offering unequalled advantages to the agriculturist and manufacturer.

Our mineral treasures exceed those of any state in the Union—treasures far more valuable than the mines of Potosi or Goleonda. Coal, of every variety of species, salt, iron, lead, copper, sulphur, alum, ochres, limestone, marble, marl, clay, and many other minerals, excellent in quality and inexhaustible in quantity, are diffused throughout our territory. Millions have been expended to increase the facilities of our commercial intercourse; but with all these advantages, three-fourths of our state is a wilderness shaded by the primitive forests.

Our soil supports scarcely one-tenth of the population it might maintain with convenience; the tide of foreign emigration passes over our delightful vallies, leaving scarcely a solitary straggler behind. Our citizens, the sinews of our strength, abandoning their native soil, seek in the western wilderness a happier home; our commerce, deserting the accustomed channels, is abandoning our metropolis, to enrich the capitals of rival commonwealths: our state, once the first in the number of her population, is now outnumbered by a northern rival. But a brighter day is about to dawn on Pennsylvania; the attention of her citizens has been directed to the infallible panacea which alone can remedy these evils—and that panacea is the union of the eastern and western waters. When this mighty scheme shall be accomplished, we may hail with perfect confidence the commencement of permanent prosperity.

Agriculture, so justly the pride and glory of our state, will no longer languish from the difficulty or impossibility of conveying its productions to market: produce of every description can then be transported at one-tenth of the expense now required; and the farmer can procure every article of domestic consumption with far greater economy. Stone, timber and lime, to construct his buildings; furniture, clothes and fuel for his household; farming utensils, rails for fencing; salt for his stock of cattle; marl, lime, gypsum, and other manures, to enrich his soil, and many other articles of considerable utility, which at present cannot defray the expense of carriage, will then be attainable with the most perfect facility.

Manufactures, for which nature has provided in this state particularly, such unbounded water power, will be established in every district, providing at the very door of the farmer, a market for his produce and cheap articles for his consumption. At present many of the manufacturers in the interior of this state, are limited in their operations in consequence of the enormous freight demanded for conveying the raw materials to their factories, and the manufactured articles to the consumers. If this heavy expense could be diminished, how vast an amount of capital now dormant in the state, would immediately be profitably invested in manufactures, in the interior counties, where the cheapness of labour, and of provisions, with the abundance of water power, of coal, iron, and timber, will offer facilities unequalled by any state in the Union.—Villages will rise in the wilderness with the rapidity of enchantment; and a numerous, industrious, and intelligent population, will soon convert our gloomy forests into blooming gardens, or farms of luxuriant fertility.

Commerce will revive with tenfold energy; articles hitherto unknown in our exports—articles which, in consequence of the expense of land conveyance by roads, could never enter our market, will then form prominent items in our exports.

Our mountains of coal, of iron, and of marble, at present in many districts worse than useless—the forests of excellent timber, which are now devoted to the flames—and many of the productions of agriculture, which at present cannot defray the expense of transportation, will then become inestimable treasures.

Our metropolis, once the emporium of the Union, may, perhaps, again assume her former pre-eminence. That this expectation is not altogether visionary, will appear from the following considerations. The only rivals Philadelphia must contend with, are New Orleans, Baltimore and New York.

If a railway, or even a canal, existed between Pittsburg and Philadelphia, New Orleans would not require the consideration of a moment. The great distance of that port from Kentucky, Indiana, Ohio, and Pennsylvania; in winter, the ice in the Ohio river, and the numerous sawyers obstructing the navigation at a season when otherwise it would be more profitable to the owners of produce; (who generally arrive at New Orleans when the market is overstocked;) the pestilential atmosphere of the lower portion of the Mississippi river, destructive equally to the health of the navigators and to their cargoes; the want of capital in New Orleans, and the distance from the ocean and from Europe, &c. are powerful objections to this port. In consequence of the introduction of steam boats, the expense of the transportation from Louisville to New Orleans, is only 5 mills per lb., or $10 per ton; but from Louisville to Philadelphia, by a canal or railway, the expense would be far less. (See the previous essay.)

Baltimore presents itself as the second rival: at present, by the free turnpike to Wheeling, and the shortness of the distance, some advantage is acquired over Philadelphia; but unless Baltimore constructs a canal or a railway, she cannot for a moment endure the competition of the enormous capital of Philadelphia; and in the latter case but little is to be apprehended, as the length and expense of constructing these works will be far greater than those contemplated in Pennsylvania.

New York is the third rival to be considered: her beautiful harbour open at all seasons, and situated near the ocean, possesses many advantages over the port of Philadelphia; but the communication between New York and Pittsburg must be effected by a long, tedious and expensive voyage, *requiring four changes of vessels. The route of nearly 800 miles will be very circuitous, and will be impracticable five months in every year.*

The route from Philadelphia to Pittsburg is *about half the distance*, and the expense of transportation (exclusive of tolls,) will be on a canal about one half, and on a railway about one fifth only of the expense required on the New York route: and, if the tolls on the New York canal, should be reduced so as to yield merely five per cent. on the cost of the same, the tolls on the Pennsylvania route would be about one fourth only of the tolls which would be payable on the New York route. If, therefore, New York should not construct a railway from her metropolis to Pittsburg, Philadelphia will monopolize the commerce of the western country.

The amount of tonnage transported on the New York canal, in the year 1824, was about 157,000 tons. On the completion of the canal during the present year, it is calculated (by judges whose means of information and accuracy in prediction, has hitherto entitled them to implicit credit,) that upwards of three hundred thousand tons will be transported.

The population who will receive the benefit of this canal does not exceed 1,200,000 persons.

The population which will be within the sphere of influence of the Pennsylvania railway (or even canal,) will be more than double this number of persons; this, in conjunction with the other circumstances stated in this essay, induces us to suppose that less than double the above annual amount of tonnage may be confidently assumed, as the estimate for the tonnage on the Pennsylvania railway—viz. 500,000 tons—an amount of inland commerce far exceeding the whole commerce of the port of Philadelphia.[*]

The benefit which Philadelphia and the state will derive from the execution of this important chain of communication, may be obtained for the sum of $3,000,000, (an amount scarcely exceeding the expenditure on the great Pittsburg turnpike, including the bridges over the rivers Schuylkill and Susquehanna,) a sum so trifling, so far and so completely within the means of the Commonwealth of Pennsylvania, (the most wealthy in the Union,) that any attempt to point out ways and means to obtain this trifle, might seem a premeditated insult to the majesty of a state, whose unbroken faith in all financial engagements, from her settlement to the present hour, enables her to raise, at a moment's warning, any sums, however large, which those who guide her destinies, may think requisite for her accommodation.

When all these circumstances are considered, policy indicates the only course which our commonwealth should pursue; the history of our state justifies the sanguine expectation, that our citizens will avail themselves of the advantages which Providence has so bountifully bestowed, and that all the resources of the state have not been conferred on a population ignorant of their value, or too indolent to enjoy the treasures offered to their acceptance.

To facilitate the transportation of commodities; to destroy monopoly;[†] to promote agriculture, com-

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tion of 100 tons of merchandize by a locomotive steam engine.

The expense, if horse power only is employed, will now be stated. When the maintenance of horses requires 37½ cents per day, and the wages of drivers 75 cents, the expense of transporting the 100 tons 100 miles will be $18.75. (See the preceding essay.) The railway in this case will cost $3,000,000—to obtain an interest of 5 per cent. viz. $150,000, and the sum of $50,000 for repairs, the toll on the above 500,000 tons must be $200,000—viz. 2-15 of a cent per ton per mile, or about $13.33⅓, will be the amount of tolls charged on the above 100 tons per 100 miles; if this be added to the $18.75, (the expense for carriage,) the total charge for transportation will be $32.08 for 100 miles on the railway when constructed for horse power; deduct this sum from $48.33⅓, the expense as stated above when a locomotive steam engine is used, the remainder $18.25 will be the expense saved by the employment of horses: therefore, if goods could be transported gratis, (*i. e* excepting the tolls,) conveyance would be more expensive, (even in this case, when the labour or power required could be obtained without expense,) and for the following reason—the tolls alone would be more expensive on a railway constructed with great expense for a locomotive steam engine, than the whole cost of conveyance by horse power, including the tolls, on a railway constructed for this purpose, at half the expense of the former.

If the tolls charged should be more expensive than the extremely low estimate which is given above,[†] (and if the amount of tonnage should be less than 500,000 tons per annum, the tolls would be higher in proportion to the deficiency,) then transportation by the locomotive steam engine, will be far more expensive. In England, where the amount of commerce is enormous, and the tolls on the canals very expensive, the benefits which will result from this engine are incalculable—but it cannot be introduced with advantage into Pennsylvania, until a long period shall have elapsed.

[*] M'Clure, the eminent geologist, remarks this fact.

[†] The tolls on the New York canal are 1 1-2 cents per ton per mile for produce, and 3 cents for a ton of merchandize.

[*] The tonnage sent to Pittsburg at present, does not exceed 30,000 tons per annum, and the registered amount of the tonnage of the port, is about one-fourth only of the estimated tonnage on the railway or canal.

[†] The entering wedge to destroy monopoly was put in operation in the year 1794, when the Philadelphia and Lancaster turnpike (*the first executed on this side of the*

merce and manufactures; to render the most distant inhabitants of the west, the immediate neighbours of those residing in the East;* (and by frequent intercourse to remove prejudices, resulting entirely from the present obstacles to an acquaintance and free interchange of sentiments;) to promote our defence in war, and to diffuse the blessings of "peace and plenty round a smiling land," have too long and too frequently been objects of contemplation and solicitude to the reflecting citizens of this Commonwealth, to suppose that any other course than that at present contemplated. can ever be adopted, when, if successfully executed, it would diffuse throughout the state, the advantages which wealth confers in the increase of physical comforts, in the advancement of literature, science, and the arts, (the constant attendants on national prosperity, in America,) and in the creation of new sources of industry. promoting morality, by furnishing employment to all her citizens, and thereby removing the temptations of indigence,—*objects so transcendantly important, so ardently desired, and so perfectly attainable*. that it is a libel on our legislature to suppose them capable of hesitation. or deficiency of resolution, when the delay of every hour is detrimental to our welfare. But this important point has already been decided by a tribunal from which there is no appeal—*the people have commanded that a communication must be effected, and their representatives must obey.* [*U. S. Gazette.*

RECIPES.

The following copied from the manuscripts of the late Col. Benjamin Hawkins, in our possession, may be of service to some of our country friends. [*W. C. Gaz.*

DIRECTIONS FOR TANNING.

Green Hides.—Take them immediately from the carcase to the pond, and let them remain 12 hours. Then put them in lime. One peck of black jack ashes to a hide, if large, or half a bushel to three hides.

If the season is warm, in three or four days the hair will come; as soon as it will come take it off. The 1st, 2d, and 3d day work them well in the lime; do this by taking them quite out, and replace them; if necessary, add ashes and always water enough to cover them. After they are haired take them to the pond; the 2d and 3d day work each side well till the water or lime appears to be out of the hide of a dryish east. The 4th day put them in beaten bark, so that no part of a hide lies on another bare; here they are to lie 9 days, and then be replaced in a second bark. Six weeks after, replace them in fresh bark and let them remain in the tan; the longer the better.

TO MAKE JAPANNESE CEMENT OR RICE GLUE.

This elegant cement is made by mixing rice flour intimately with cold water, and then gently boiling it. It is beautifully white, and dries almost transparent. Papers pasted together by means of this cement, will sooner separate in their own substance than at the joining, which makes it extremely useful in the preparation of curious paper articles, as tea trays, ladies' dressing boxes, and other articles which require layers of paper to be cemented together. It is in every respect preferable to common paste made with wheat flour, for almost every purpose to which that article is usually applied. It answers well, in particular, for pasting into books the copies of writings, taken off by copying machines, or unsized silver paper. With this composition, made with a comparatively small quantity of water, that it may have the consistence similar to plastic clay, models, busts, statues, basso relievos, and the like. may be formed; when dry, the articles made of it are susceptible of a very high polish; they are also very durable. The Japannese make quadrille fish of this substance, which so nearly resembles those made of mother of pearl, that the officers of our East Indiamen are often imposed upon.

TO DESTROY RATS OR MICE.

Mix flour of malt with some butter; add thereto a drop or two of oil of anniseed; make it up into balls, and bait your traps therewith. If you have thousands, by this means you may take them all.

THE FARMER.

Baltimore, Friday, June 3, 1825.

Cattle Show.—We have not had a moment to give any account of our great annual exhibition. The address of the president, and the reports and awards of the committees will be given in our next. We can only now say, that every thing passed off most satisfactorily, and to the heart's content of all the members of the Maryland Agricultural Society, and promoters of improved husbandry in every branch.

WANTED,

A GARDENER—and if acquainted with farming and sheep husbandry, and of steady, industrious habits, he may, on application at this office, hear of a situation—bringing with him, at the same time, testimonials of general good deportment. *May 25.*

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	7	9		
COFFEE, W.I. Green, .	—	17	21	20	25
do. Common,	—	16	17	18	20
COTTON, Louisiana, &c.	—	22	26		
Georgia Upland, . . .	—	22	24		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	11	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	32	33		
FISH, Herrings, Sus. new	bbl.	2 18		2 25	
Shad, trimmed, new,	—	6	6 50	7 00	
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	5			
Fine, ...	—	4 62			
Susquehanna, superfi.	—	4 75	5		
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	42	44		
Wheat, White, ...	—	1 05	1 10		
do. Red, ...	—	1 00	1 02		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, ...	—	3	3 25	3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	9			
LEATHER, Soal, best,	—	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 50		1 75	
Pitch, ...	—	1 50	1 75	2	
Turpentine, Soft, . .	—	3			
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	35	50		
RICE, fresh, ...	c.lb.	3 50	4		
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	6	8	10
WHISKEY, 1st proof, .	gal.	26		37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—	28	30		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	10 25			
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs.	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Ground Alum, ...	—	60	65		
SHOT, all sizes.	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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Atlantic,) was executed. It met with great opposition from those interested in preserving a monopoly; but vigorous and judicious efforts silenced the clamours of those who attempted to defeat a plan, the benefits of which are now so apparent. The same interested opposition, founded on selfish and false principles of political economy, influenced the opponents of the first turnpike, constructed about 70 years since near London. Canals and railways have hitherto, (so far from proving detrimental to the interests of road proprietors,) by creating more commerce, actually benefited the works they seemed calculated to supersede.

* The village of Astoria, on the Columbia or Oregon river, near the Pacific Ocean, distant between 3 and 4,000 miles from Philadelphia, will, when at some distant period a railway may be constructed, be considered in a commercial view, at no further distance from us than the city of Lancaster is at present by the turnpike, the *expense* of carriage being considered. In point of time, of course more delay will be experienced, unless the rapid locomotive engine be adopted. at the rate of fifteen miles an hour, (the estimated velocity in England.) Astoria may, in this case, be visited from Philadelphia in 240 hours; viz. in ten days!!! From the rapidity with which merchandize is conveyed in Great Britain, (four to eight miles per hour on the railway,) vast benefits must be derived by that commercial and populous country. The same rapidity, although desirable, cannot prove equally beneficial in the United States. Hence, the locomotive engine cannot be employed with the same advantage here. In Great Britain, the expense of maintaining horses, and the tax on them, compared with the cheapness of machinery, and abundance of coal, recommend the employment of steam engines, where it would not be expedient in America.

AGRICULTURE.

ANNUAL CATTLE SHOW,

For the exhibition and sale of Improved Domestic Animals, Agricultural Machinery and Implements, and Household Manufactures—held by the Maryland Agricultural Society.

The Maryland Cattle Show and Agricultural Fair was held agreeably to appointment, on Wednesday and Thursday of last week. It has been found impossible to fix upon any season for these shows which was not liable to some objection. In autumn, the days are short and the weather precarious, and often unpleasant; the planter objects that he cannot leave home, fearing his tobacco may be overtaken by a "nipping frost"—the farmer is busy gathering his fodder and seeding his grain, &c. In early spring, on the other hand, domestic animals have not cast their winter garb, and in some counties it is not known how many will survive the "ides of March," when they are liable to be attacked by a noted disease called "on the left," which sometimes proves mortal. In later spring, the planter is waiting impatiently for a "planting season," for which he relies on the prayers of his pastor, or, peradventure, with more confidence, on the changes of the moon. Is mid-summer proposed as a better time for this great assemblage of farmers, to that it is objected that the weather is too hot, and that all hands are busy making hay and harvesting—men, women and boys—

> "Ev'n stooping age is here: and infant hands
> Trail the long rake, or with the fragrant load
> O'ercharg'd, amid the kind oppression roll.
> Wide flies the tedded grain all in a row
> Advancing broad, or wheeling round the field,
> They spread their breathing harvest to the sun
> That throws refreshful round a rural smell."

It was not without much solicitude and consideration, that the trustees fixed on the first of June, as liable to the fewest objections, and under all circumstances, the most convenient; nor have they, from the experience afforded now by two shows at that season, any reason to be dissatisfied with having permanently fixed upon it as the time for their future exhibitions.

The assemblage on this occasion was not only very numerous, but it was observed by all that it consisted more exclusively than it had ever before done, of highly respectable landholders and gentlemen known for their practical skill and success, as well as for their general intelligence—coming from Pennsylvania, Rhode Island and Connecticut, from the east, and Virginia, and even the Carolinas, from the south.

Under an improved order of arrangement adopted by the Board of Trustees, the Committees were organized and proceeded to the duties assigned them at an early hour on the first day.

The exercises of the second day commenced with the trial of ploughs, and closed with the delivery of the premiums to the successful competitors.

The absence of Gen. Charles Ridgely, of Hampton, the president of the society, had been noted with regret, and when the time had arrived for the distribution of the premiums, an address from the General, explanatory of the cause of his absence, was announced by R. Caton, Esq., acting president of the day, accompanied with kind expressions of his individual respect and of the general concern on the occasion.

It was now made known from the chair, that previous to the delivery of the premiums, the Corresponding Secretary (Editor of the American Farmer,) had been requested and would receive, announce, and record, any toast or sentiment, which any gentleman might be disposed to volunteer to the company. Such as were offered will be found in this paper at the end of the reports of committees.

Here it is necessary to explain that the Board of Trustees had invited the President, and all the heads of Departments at Washington, to witness the exhibition; but absence from the District, or indispensable engagements, prevented all from attending, except the Secretary at War, who, being himself both planter and farmer on a large scale, yielded to the ruling passion, as an old huntsman is animated at the sound of the horn; and appeared upon the field before many of the members were there to greet him.

The president and vice-president (Col. Lloyd,) being absent from indisposition on the second day, the board of trustees adopted unanimously the following resolutions:

Resolved, That the Board of Trustees of the Maryland Agricultural Society, in entertaining the highest personal respect for Governor Barbour, are much gratified that it has been convenient to him to honour the society's fair and cattle show with his presence.

Resolved, That a committee be deputed, consisting of two members of the board of trustees, to wait on Governor Barbour, and invite him to present the society's premiums to the fortunate competitors.

H. V. Somerville and George Howard, Esqrs., were authorized to communicate to him the wishes of the society; but Governor Barbour not being then on the ground to render the obligation solicited, General Macomb was requested to officiate.

The chairmen of the committees were then called upon to read their reports, in the order in which they are published.

On the successful candidates being called up, the tokens of excellence which had been won by their skill and industry, were presented by Gen. Macomb in a manner so graceful, and with sententious observations, in reference to the subject matter of each premium, so remarkably felicitous and appropriate, as highly to entertain and gratify the society, while he appeared to impart additional value to every trophy, in the estimation of those who had the good fortune to win them. In most cases, they were accepted with silent, but *expressive* satisfaction—in some cases with short and happy acknowledgments, one of which occurs to us. On receiving the premium for the best Devon Bull, in answer to the General's remarks on the importance and indispensable agency of this animal, to the fullness alike of the dairy and the shambles, Mr. George Howard replied—"As I will answer for myself, so I hope that this bull will never disgrace the *Cow-pens*."*

The Society passed unanimously a vote of thanks to General Macomb, for the kind and highly acceptable manner in which he had complied with their request to deliver the premiums. The proceedings of the day were very happily terminated by an animated and fluent extemporaneous address from R. Caton, Esq., on the general condition of Maryland husbandry, and the importance of electing delegates to the legislature, with an express view to its improvement by legislative provisions, on many points designated by him in the course of his address.

ADDRESS OF GENERAL RIDGELY,

Pronounced in the General's absence, by James Howard, Esq., secretary to the society.

To the Members of the Maryland Agricultural Society,
Gentlemen,

No circumstance has recently occurred that causes me to feel my continued indisposition with more acute sensibility, than the necessity it imposes upon me of absenting myself from the present meeting of the Agricultural Society. It is an institution in which I have always delighted, because of the general good it is calculated to produce; and it would have given me peculiar pleasure to have thanked the members, in person, for the honour they have unanimously conferred upon me, of electing me their president. In accepting it, I was actuated by the cheering hope, that a return of health would soon enable me to attend to the active duties of the appointment; and if able, those duties are so congenial to my habits, and my ambition, if I possess any, that they would have been performed with alacrity and pleasure. They shall engage as much of my attention as I can, without danger, bestow upon them; and if I find I cannot fulfil the wishes of the society, I shall be justified in resigning them into abler hands.

It must be evident to the members of this society, as it is to every intelligent observer, that the institution of societies similar to our own, is producing incalculable benefits in all parts of the world, where they exist. In Maryland, more than in any state east of us, there was room for improvement. In early times, the cultivation of the soil was limited principally to two staples, tobacco and corn, which were great exhausters; and the habits of our early planters led them, as soon as a field was exhausted, to seek for fresh soil, and totally to neglect their worn out grounds. Good examples, the extension of science, as applicable to agriculture, and the emulation that has been excited to improve and to excel, have effected a revolution in these pernicious habits. We can now see, in every direction, the restoration of barren fields to a state of productive healthiness. A course of cultivation is also adopted, which is more favourable to the preservation of soil; and a system of general improvement is introduced, which promises the most happy results to the fortunes, the morals, and the happiness of our citizens.

The improvement too, every where visible, in the breed of horses, horned cattle, sheep and hogs, owes much of its success to the emulation excited by agricultural societies, and the knowledge they have caused to be diffused by their various publications on this subject. Much has been done, but more remains to be done. The judicious distribution of premiums subserves the purposes of the society in exciting emulation, and ought to be persevered in. The wise and benevolent theorist finds a reward in promoting the public good. But the practical farmer and breeder, who aims not at literary fame, is encouraged by visible marks of public approbation. The success of this expedient is the best argument for its continuance.

The present is, not inaptly, styled the age of improvement. The exhibition of farming utensils and agricultural implements, on occasions like the present, is an interesting spectacle. It is impossible to witness so many specimens of original invention, and so many proofs of ingenuity and skill in applying the discoveries of others to our own soil and situation, without feeling a glow of admiration. The mechanics of our country merit success and deserve applause. Were I to indulge my feelings, I should enlarge more on these interesting subjects. But in the present state of my health, I must content myself with assuring you of my ardent wishes for the success of the society, and my determination, by example and precept, to promote all their designs.

C. RIDGELY, of Hampton.

REPORTS OF THE COMMITTEES APPOINTED TO AWARD THE PREMIUMS BESTOWED BY THE MARYLAND AGRICULTURAL SOCIETY.

[*Mem.*—Though the committees award the premiums in *money*, it is to be remembered that in all cases they consist of pieces of *plate*.]

STALLIONS.

The committee to whom has been assigned the duty of awarding the several premiums offered by the Maryland Agricultural Society, for the best horses, beg leave to report, that they have carefully examined the many and various animals exhibited for their inspection, and although not without much deliberation and hesitancy, have finally resolved upon the following awards:

---

*Mr Howard is the eldest surviving son of the hero of the Cowpens.

For the best stallion adapted to get horses for the saddle, they award the premium of $15, to the sorrel horse owned by Mr. Chas. Carroll, Jr. of Carrollton.

For the best do. adapted to get horses for the quick draft, the premium of $15, to Mr. Jacob Hollingsworth's horse Bashaw.

For the second best do. the premium of $10, to Mr. Thomas Lewis's horse Tom Jefferson.

For the best stallion adapted to get horses for the slow draft, the premium of $15, to Mr. Dall's horse Stranger.

For the second best do. the premium of $10, to Mr. George Mallonee's horse Superior.

The committee beg leave further to represent, that, holding the subject that has been submitted to their attention, as of primary importance to the community, they are unwilling to dismiss it with the bare distribution of the appointed premiums; but would recommend to the consideration of the public, several horses and colts which were, from their particular ages or location, thrown out of the competition. Amongst these, was Sir Harry, a beautiful horse, of uncommonly fine action, the property of Col. C. S. Ridgely, of Elkridge; a fine three-year-old horse, of distinguished merit, belonging to Col. Emory, of Queen Ann's, sired by Silver Heels; a two-year-old colt, of great promise, from New York, the property of Mr. Stephen Eustis; and one of the same age, sired by Tuckahoe, belonging to Mr. Swartze, of Baltimore county, of nearly equal merit.

John Mercer,
Henry Willis,
Charles Carnan,
Samuel Owings.

BROOD MARES.

The committee on brood mares report,

That they have found Col. Ridgely's bay mare to be the best brood mare, for the saddle; and they award to him the premium of $10.

Mr. Owings's mare Nance, the best for quick draft; and award to him the premium of $10.

Mr. Willis's black mare, the best for slow draft; and award to him the premium of $10.

Governor Wright's grey mare, the best for the turf; and award to him the premium of $15.

The committee are happy to remark the increase in numbers and improvement in the quality of the mares offered for exhibition and premiums.

Charles C. Harper,
Daniel Kent,
John Yellott, Jun.

JACKS.

The committee appointed to award premiums for the best asses and mules, report, that few were exhibited. They regret that so little attention has been paid to these objects. But one mule was exhibited, aged two years and ten months, which, although a fine animal, was not, in the opinion of the committee, so remarkable as to be entitled to a premium.

They award the premium of $10, for the best Jack, to the agent of the estate of the late John Thompson Mason; and to the same, the premium of $10, for the best Jennett.

Others were exhibited to the committee, but they considered those belonging to the estate of Mr. Mason, from their size and other qualities, entitled to the premium.

A. Nisbet,
Joseph N. Stockett,
Sam'l Hollingsworth, Jr.
Henry A. Hall.

CATTLE.

The committee on cattle beg leave to report,

That they award to Edward Lloyd, of Talbot county, for his bull Champion, the premium of ten dollars, as the best full blood improved short horn bull.

Champion having heretofore received a discretionary premium, on his first arrrival in this country, his owner generously declined entering him for the premium to be awarded the best bull of any breed, believing, we presume, with this committee, that to be the best bull of the improved short horn blood, is to be the best bull of any breed.

For the best bull over two years of age, of any breed, the committee award the premium of $10, to William Gibson, of the city of Baltimore, for his bull Rob Roy.

[He was by an imported short horned bull, property of Lloyd N. Rogers, Esq. out of a native cow.]

For the second best bull over two and under three years of age, the committee award to John Yellott, Jr. of Baltimore county, the premium of $5, for his bull, three years old, of the mixed short horned blood.

For the best full blood Devon bull, the committee award the premium of $10, to George Howard, of Anne Arundel county, for his full bred bull of the above breed, 22 months old.

The committee regret to state, that, for the premium of $8, for the best bull between one and two years old, there was no competition; but beg leave to award the above premium of $8, to J. W. M'Culloh, of Baltimore county, for his beautiful bull Reuben, two years and five months old, of the Tuscany breed.

To Henry V. Somerville, the committee award the premium of $10, for his cow Helen M'Gregor, of *country blood*, as the best milch cow; satisfactory testimony having been produced, that 13½ lbs. of butter, per week, has been made from her milk.

For the second best milch cow, the committee award to John Mercer, of Anne Arundel county, the premium of $8, for his cow Nancy, of the Alderney and Hereford blood.

To Henry Holliday, of Talbot county, the committee award the premium of $8, for his beautiful heifer Flirtilla, two years old, by the improved short horn bull Champion.

For the second best heifer, over one and under three years old, the committee award the premium of $6, to William Woodward, of Brookville, for his heifer, of the native breed.

A great number of beautiful heifers were exhibited for inspection; many of them entitled to great consideration for their beauty, size, and symmetry. The committee were in some doubt in making the second selection, but were determined by Mr. Woodward's heifer having given proof of being a deep milker.

One yoke of oxen only were offered for premium; but the committee do not consider that they possess such extraordinary qualities as, in the absence of competition, will entitle them to premium.

The attention of the committee was particularly drawn to a calf of extraordinary size and beauty, sent up merely for exhibition, (there being no premium offered for animals of that class,) by Mr. Joseph Gales, of the District of Columbia; to whose zeal we have been indebted for interesting contributions to all our previous shows. This fine calf was only five months old; by Columella, out of Cora; Cora out of a Brighton prize cow, property of S. W. Pomeroy, Esq.; she, by the celebrated short horned Holderness bull; Holderness, property of Gorham Parsons, Esq.

The committee were highly gratified at the great number of fine cattle which were presented to their view; and, in the absence of premiums can only award their thanks to the public spirited gentlemen of our country, whose exertions have contributed so much to the improvement of our native stock.

Edward N. Hambleton,
Roger Brooke,
Wm. Carmichael,
Charles R. Dorsey,
Reuben M. Dorsey,
John Kelso.

SWINE.

The committee on swine award the first premium for boars, to Mr. John Sullivan, of Brookland, for his black boar, thirteen months old, of the Peruvian cross with Cobbett's English boar. This hog, as a breeder, the committee think best calculated for the production of a stock suitable for the salters of the city of Baltimore. There is no other objection to him as a breeder, than his large bone, (which may be diminished by a further cross with the China or no-bone breed, of Pennsylvania,) and the undergrowth of wool, which originates from bad keeping.

The second premium for boars is unanimously awarded to Mr. Jacob Hollingsworth, for his half China and half no-bone boar, to which the first premium was heretofore awarded. This hog has, decidedly, the best gammon in the enclosure.

Mr. Skinner's imported English boar is a very fine animal in point of size; and he deserves the thanks of the society and all good breeders, for the pains he has taken to afford an advantageous cross.

The first premium for sows is unanimously awarded to Mr. John Sullivan, for his Peruvian sow and her farrow of 11 pigs. She has brought her *sample* along with her, and proves that she is best capable of complying with the motto on the Maryland coat of arms, and of fulfilling the wishes of the Agricultural Society of Maryland.

The second premium for sows is awarded to Mr. John S. Skinner, for his English sow Bess. She is a perfect specimen of symmetry.

There are two fat barrows, to the owner of whom the committee would be pleased to award a premium, if within their province.

There are also two pigs from Pennsylvania, now owned by a gentleman in Montgomery county, Maryland, that have the marks of great promise; but not being of the age limited in our instructions, we can only recommend them to all persons who wish to raise fine meat and love to eat it.

R. G. Stockett,
Samuel C. Owings,
Harry D. G. Carroll,
Benjamin F. Mackall,
Tobias Rudulph.

FAT STOCK.

The committee to whom was referred the decision upon fat stock, regret that the duties assigned them were, in consequence of there being no competition, so light and circumscribed.

Notwithstanding the hogs exhibited by Mr. Clap, would perhaps vie with any others in the state, it would yet have been more satisfactory to your committee to have been called on to decide between many competitors. These hogs are 1 year and 18 days old, of the Byefield, Bakewell, and Duke of Bedford breeds, crossed; were fed upon common pasture until the winter season; they then had two ears of corn per day, until about 4 months since, when they were penned and fed upon slop-mush, made of corn meal, and occasionally, corn and milk. Although your committee had no means of ascertaining their precise weight, they judge them to be from 300 to 350 lbs. each, and consequently, award the first premium for hogs to Mr. E. Clap, of Anne Arundel county.

Jacob Poe,
R. C. Tilghman,
Samuel Brown, Jr.

SHEEP.

The committee for awarding premiums on sheep, and for the greatest number of lambs, respectfully report,

That having with care and diligence examined the objects to which their attention had been directed, they have adjudged the premium for the best merino ram, over one year old, to Samuel Brown, jun. Esq. of Elkridge.

The premium for the best ram of any other breed than merino, they assign to the Hon. Edward Lloyd, of Talbot county.

For the premium for the best pair of merino ewes, a number of pens of sheep deserving high commendation, were exhibited by Dr. R. G. Stockett, Mr. J. W. M'Cullob, Dr. Thomas, and Mr. S. Brown, jun; and the committee found it somewhat difficult to decide upon their relative merits, but conceiving the fineness of the wool in this valuable animal to be the most essential point, they have found themselves obliged to be chiefly governed thereby, in adjudging the premium to Dr. Stockett, of Elkridge.

For the premium for a pair of ewes of any other breed than merino, a pair were exhibited by James Piper, Esq. of the Bakewell and Merino cross; of which one ewe was extremely handsome in point of form, and of a good size; but the other ewe not being remarkable, the committee do not find themselves permitted by the rules of the society, to award a premium in this case, which was assigned for the *best pair.*

Mr. Harrison, of Anne Arundel county, exhibited a ram of the common breed, which struck the particular notice of the committee, for its fine figure and size; and conceiving it to be of importance to the agricultural interest to encourage the growth and exhibition of the best species of country sheep, and also that they are objects which the society is much disposed to encourage, the committee take the liberty to recommend, that the premium which they have not been able to appropriate to its original object, be adjudged to Mr. Harrison.

The premium for the greatest number of lambs in proportion to the number of ewes, (not less than 20,) is awarded to Mr. Thomas B. Stabler, of Montgomery county, whose flock of 22 ewes has brought, this spring, 27 lambs; all of which were living and in fine order, up to within a few days of the present exhibition.

The committee cannot close their report without paying the well merited tribute of praise to Mr. Barney, of Delaware, for the exhibition with which he has again favoured the society, of a number of excellent sheep of the Bakewell breed. And the committee take leave to add, their commendation of the skill and despatch (say 13 minutes) with which the shearing of a sheep in their presence was performed this morning, by Richard Topham, [an unawarded premium was, in this case, given to Mr. Topham, with the unanimous approbation of the society,] and to suggest to the consideration of the trustees, whether a premium should not, at the next exhibition, be offered for such peculiar expertness.

J. G. Proud,
Thomas Hood,
V. Maxcy,
Thomas Tongue,
H. Carroll,
F. Tilghman.

WOOL.

The committee on wool, report—that they have awarded to Caleb Stabler, of Montgomery county, the premium of 50 cents per lb. for a fleece of one year's growth of washed wool, weighing 6½ lbs.

To Joseph L. Smith, of Frederick county, they have awarded the premium plate of ten dollars for the greatest average weight of wool for a flock of sheep, of 23 in number.

For the first premium there were but two competitors; the successful candidate exhibiting a fine fleece of Merino wool, which, under the instructions by which they were governed, the committee felt themselves bound to give preference to over the one offered by Mr. Smith, of Frederick county, whose fleece being of an inferior quality, could not be considered equal in value. But as it is a superior wool for coarse manufactures, the committee would suggest the propriety of awarding, hereafter, premiums on fine and coarse wool.

The second premium was contended for by five competitors—but the extraordinary yield of Mr. Smith's flock of Frieseland sheep over that of the full and mixed Merino, gave him an easy victory.

The following list shows the average weight of each flock:

	fleeces.	*lbs.*	*average.*	
Joseph L. Smith,	23	204½	8 lbs.	14 oz.
John Sullivan,	27	172¾	6	6
James Carroll,	35	222	6	5½
Roger Brooke,	25	151	6	0¾
John Ensor,	20	72	3	10

These 20 fleeces were washed, and from ewes that have raised lambs this spring.

Jacob Jones,
Geo. C. Washington,
J. S. Williams,
H. G. S. Key,
John Dare.

DOMESTIC FAMILY MANUFACTURES.

The committee on Domestic Family Manufactures, having carefully examined the different fabrics exhibited for premium and inspection, report to the Society,—That the articles exhibited, though excellent in their kind, are not so various as was expected from the public offer of premiums;—no cassimere was offered, nor any of that all-important and valuable kind of goods, "kersey adapted to labourers," alike encouraging economy and comfort in every family where its manufacture is attended to; or shirting, linen diaper, towelling, woollen counterpanes, woollen blankets, cotton hose, thread hose, grass or straw hats, or any evidence of the diligence and skill of domestic spinners of cotton, wool, or flax—articles and information in themselves highly deserving the attention of an agricultural community, and certainly within the reach of the skill and taste displayed in the production of such articles as were exhibited.

To Mrs. Ann Sparks, of Queen Ann's county, they award the premium of the best pair of woollen hose; and in justice to the skill of that lady, will mention, a beautiful and well knit pair of well mixed cotton and silk, which, though they do not come strictly within the object of the premium offered for the best pair of cotton hose, yet the committee recommend the premium to be awarded her. To Mrs. Elizabeth Richardson, of Frederick county, they award the premium for the second best woollen hose.

The hearth rugs were all very superior, displaying great durability, taste in the colours, and skill in the manufacturing. To Mrs. Ann M. Byers, of Dorchester county, they award the premium for the best hearth rug, from the very superior embossed work thereon; and to Mrs. Maynard, of Talbot county, the premium for the second best, which was so very well and substantially manufactured, and neatly coloured, as to have advocates for the first premium.

To Mrs. A. Skinner, of Talbot county, they award the premium for the best piece of carpetting; and will mention the very superior carpetting exhibited by Mr. G. M. Conradt, of Frederick county, which, from its superior quality for durability and great taste in colouring, would have been entitled to the premium, but that it was made under manufacturing advantages, not in the reach of our families generally, and not coming within the "domestic *family* manufacturing" views of the society.

In the exhibition of hearth rugs and carpetting there was much competition: none inferior, and all entitled to great praise for the taste and durability of the articles—any or either of the specimens would have done great credit to any family, and are worthy of imitation.

The flannel exhibited by Mrs. Col. Tilghman, of Queen Ann's county, is certainly a superior piece of goods; but having a cotton warp, does not seem strictly to come within the object of the premium offered, and with the thread less twisted, it might have been equally substantial and more comfortable wear; but its excellence induces the committee to recommend it for the premium offered for that article. The cassinett exhibited by Samuel Brooke, of Montgomery county, is rather thin, though well dressed and dyed; but is too deficient in quality for any premium to be awarded. To Miss Merryman, of Baltimore, they award the premium for the best piece of cloth, the *thread* and *weaving* of which the committee think was well executed.

No premium was offered for cotton counterpanes; but the committee viewed with pleasure the two cotton counterpanes exhibited by Mrs. Sellman, of Anne Arundel county, and Mrs. Mayuard, of Talbot county, each displaying considerable ingenuity and taste.

The committee regret, that amidst so much industry and taste as seems to be applied to the ornament and comfort of the household, there was nothing offered for their inspection of those coarse materials suited to the use of our labourers, and so certainly ensuring economy in our families; and they cannot in justice to the domestic economy of this agricultural people, close this report without mentioning, that some of the articles have received rather too much aid from the public factories, to bring them strictly within the objects of "*domestic family manufactures.*"

The committee think that inducements for exhibition should alike be given to those distant and contiguous to public factories, and that domestic industry and economy, would be best promoted in families, by relying on their own skill, industry, and means.

All of which is respectfully submitted.

H. G. S. Key,
John H. Briscoe,
Francis M. Hall,
Moor Falls,
Thos. Hemsley,
James Piper,
Daniel Jenifer.

IMPLEMENTS OF HUSBANDRY.

The committee on Implements of Husbandry beg leave to report—That they have examined the machinery presented to their consideration, and do not find among them any that are presented for the premiums offered by the Society. They have however been highly gratified in noticing the great improvement which has been made in the construction of the ploughs, wheat fans, straw cutters, cultivators, &c. from the several manufactories that have heretofore presented their implements—which afford strong claims to an increasing public patronage.

Sam'l M'Culloh,
Robert Bowie,
Wm. Ellicott.

FERMENTED LIQUORS.

The committee who were appointed to judge of fermented liquors report—that several specimens of currant wines were exhibited. but as the society had not allotted a premium for currant wine, the committee did not feel themselves authorised to award a premium; although it was decidedly their opinion, that a sample of currant wine (No. 1) five years old, was in every respect worthy of distinction. This wine was made by James H. M'Culloch, Esq. called Zante. The currant wine of 1823, made by A. H. Boyd, Esq. was also considered meritorious.

There were but two specimens of *wine made of the native grape* presented. That which the committee considered the best, was made by Mr. Davis, of Middletown, Delaware; but being the produce of a sister state, the committee consider that it would transcend their powers to have allotted a premium for it.

There was but one candidate for the cider premium, which was by Mr. Henry Carroll, and was considéred worthy of a premium. The committee therefore award the premium of five dollars to Mr. Henry Carroll, for the best sample of cider.

John B. Morris,
John L. Potts,
S. W. Smith,
C. R. Carroll.

PLOUGHING MATCHES.

The committee of judges for deciding on the ploughing matches, found on the field selected for the exercises, the following competitors for the premiums offered by the Society, viz:

Three Horse Ploughing.

Brown's three horse plough,	entered as	No. 1
John Adams (Smith's plough)	"	" 2
John S. Eastman (Davis's patent)	"	" 3
E. Clap,	"	" 4

Two Horse Ploughing.

Hyat's two horse plough,	entered as	No. 1
Sinclair's " "	"	" 2

Ploughing by Oxen.

John Marsh (Herik's plough) two oxen,	No. 1
J. S. Eastman (Davis's patent) "	" 2

The ground was laid off in parallelograms, containing about one 16th of an acre; and all the ploughs being arranged in a line, were started at the same time; the ploughmen having been previously cautioned, that the decision would be made on the quality of the ploughing, as it regarded execution, and not the speed with which it should be performed; but requiring the ploughmen to use all due diligence in the operation After witnessing the several ploughs while operating, and carefully examining the work after it had been completed, both as to depth and breadth of furrow, by the several ploughs, the committee came to the following unanimous decision:

That the plough, No. 3, drawn by three horses, performed best; and that the proprietor, Mr. Eastman, is entitled to eight dollars, and the ploughman who conducted the plough to two dollars.

That plough, No. 1, performed the next best, and is entitled to six dollars, and the ploughman to two dollars.

That No. 2, of the two ox ploughs, executed its work best; the proprietor thereof is entitled to eight dollars, and the ploughman to two dollars.

The committee think proper to remark, that No. 2, of the three horse ploughs, executed its work in a very creditable manner; but No. 4, although the plough was a very good one and the horses of good quality, owing to the over anxiety of the ploughman, the work was not well performed, and the horses were driven too fast, and thereby great irregularity ensued, and time was lost, as the piece of ground allotted to this plough was not completed so soon as that allotted to the other three horse ploughs. Thus it is evident, that steadiness and regularity, both with regard to the driving of the horses and conducting of the plough are essential to the due execution of the work and economy of time.

The ox plough, No. 1, executed its work with great regularity; and it is due to both the ploughmen of the ox ploughs to say, that their work, as to time and appearance, was very little, if at all, inferior to the best of the horse ploughing.

The two horse ploughs having entered the lists, the committee could not but take due notice of their performances; and although there were no premiums offered to two horse ploughs by the Society, yet it is but just to remark, that their work was admirably performed, both as it regards the appearance of the ploughing and the time consumed; and therefore merit a due proportion of praise for the specimens of work exhibited.

Alex'r Macomb,
John Yellott, Jr.
Dan'l Hughes,
Sam'l Hollingsworth, Jr.
Benj. Ogle, Jr.

BUTTER.

The committee on butter, had before them for consideration, ten parcels of butter—and upon full examination and consideration, they award the first premium to Charles C. Harper, for a parcel of about five pounds; and they award the second premium to Enoch Clap.

Wm. Gibson,
Philip B. Sadtler,
Wm. H. Tilghman,
John Thomas,
John R. Dall,
Henry Thompson.

[From Mr. Harper, the successful competitor for best butter, the following note was received:]

The cows were fed for four days on clover, which was mixed, during the two last days, with a little corn meal. They were then milked; the milk was strained and put away in stone pans, to stand for twenty-four hours—at the end of which time it was skimmed, and churned in a barrel-churn. About a small handful of salt was put into the five pounds of butter. CHARLES C. HARPER.

VOLUNTEER PREMIUMS.

REPORT IN PART.

The committee on the volunteer premiums, having attended to the duty confided to them, report, that, for the first of these premiums, being for the most successful experiment in water-rotting or otherwise preparing flax or hemp, no competitor has presented himself.

The second premium, being a silver cup, of the value of twenty dollars, offered by D. Williamson, jun. Esq. for the best calf reared by hand, not less than ten months old, with a description of the manner of rearing it, &c. the committee have awarded to Henry Thompson, Esq. for his full blood Devon calf, aged ten months and a half. The written statement herewith presented, exhibits the particular information required to accompany the offering for this premium. It may be proper to add, that this calf was in excellent condition, and, for its age, well grown.

In awarding the third premium, of $5, to the housewife who shall rear the greatest quantity of domestic fowls, in proportion to the number of stock fowls, the committee have had to decide between two competitors only, but each of them with strong claims.

Mrs. John Sullivan has, this spring, had hatched and turned out 417 chickens, most of which are now alive and thriving, from 41 hens, of the Bucks county breed, and expects to have hatched *and reared*, during this season, between six and seven hundred.

Mrs. Charles S. Ridgely has, this season, *reared* 405 chickens, from forty hens, and seventy-five ducks from three old ones, all certified to have been counted.

If the "hatching" of *chickens* alone were required for this premium, Mrs. Sullivan would, by numerical computation, have the advantage in this competition; but the premium being for "domestic fowls" *reared*, the addition of the extraordinary product of "ducks," in the statement of Mrs. Ridgely's claim, decides the award of the prize to her, with the earnest recommendation of the example of both competitors to general imitation.

For the premium for the best essay on the natural history of the mule, there are six competitors; and for that for the best essay on the value and use of oxen, there are four. Owing to the want of necessary time to peruse and compare these able and interesting papers, some of which are of great length, the committee are obliged to defer, for a day or two, their report on these cases, which will be presented to the society, in connection with this report, through the medium of the American Farmer.

[The prize essays in these cases, will be published in the American Farmer.]

The preceding report was accompanied by the following communication from H. Thompson, Esq. who took the volunteer premium offered by David Williamson, jun. Esq.

Baltimore County, May 31, 1825.

To the Committee on Volunteer Premiums.

Gentlemen,

I beg leave to enter the lists with my yearling calf Sally, for the premium of a cup, offered by D. Williamson, Jr. Esq., and herewith comply with the terms required, as accurately as is in my power; but if the committee are of opinion, that the food given is undervalued, I shall cheerfully submit to any addition therein, which they may deem proper to make.

Sally is ten months and thirteen days old; is out of an imported Devon cow, by a full breed Devon bull; she sucked her mother only three days, and was raised by hand, upon new milk for one month; after which, and for the next sixty days, she had skimmed milk boiled, but given cool; at three months old, commenced giving half water with the milk, and a little meal mixed therewith, also a handful of sweet hay twice a day; after this time the milk was discontinued, and she was fed with Ruta Baga turnips cut fine and sprinkled with corn meal; and as much hay as she could eat, with water only to drink, until the 1st April, when she was turned out to grass for the first time, and has had no other food since then up to this day.

The boy who had the care of Sally was always employed about the stables, and not taken off any work for that purpose; therefore I have not charged for his time, but if the committee think proper, it can be added according to their own estimate.

Very respectfully, I am, gentlemen,
Your obedient servant,
HENRY THOMPSON.

Estimated cost of raising Sally.

1st month, 5 quarts of new milk daily, say 150 quarts, at 2 cents, - - - - -	$3.00
2d and 3d months, 6 quarts skim milk, is 360 quarts, at ½ cent, - - - - - -	1.80
4th and 5th months, 4 quarts do. is 240 quarts, at ½ cent, - - - - - - -	1.20

6th, 7th, 8th, and 9th months, ruta baga turnips, 3 quarts per day—12 bushels, at 15 cents, - - - - - - - -	1.80
2 months pasture, - - - - -	2
6 months meal, averaging 1 pint per day—3bushels, at 60 cents, - - - - -	1.80
Hay, from 1st December to 1st April, -	2
Total, - - - - -	$13.60

VOLUNTEER TOASTS

Which were drank at the Maryland Cattle Show, on the 2d of June, 1825.

By James Carroll, Jr.—The memory of Washington—the farmer, the statesman, and the patriot of America.

By Governor Wright.—The President of the United States—his administration promises to secure the best interests of America.

By Richard Caton.—The distinguished guests who have done us the honour to visit our agricultural exhibition.

By Geo. Howard.—The sloop of war Wasp—she took a *Frolic* whenever she had an opportunity.

By H. V. Somerville.—Plattsburg—an instructing lesson to an invading foe.

[It will be recollected, that on the right and left of Mr. Caton, sat General Macomb and Commodore Jacob Jones.]

By the editor of the American Farmer.—The memory of General Harper—the better he was known, the more he was personally esteemed.

By R. Caton, Esq.—The health of our president General Ridgely—May it be speedily restored to him, and he to us.

By the Corresponding Secretary.—Our vice-president Edward Lloyd—we are always encouraged by his presence, and enlightened by his example.

By Mr. Rebello, minister from Brazils.—Agriculture, the main spring of American riches—in the north, it produces flour; in the south, sugar; with the two are made fine cakes, the pleasure of youth and comfort of old age.

James Barbour, Secretary at War—welcome at our last show, as the companion of La Fayette; welcome, always, for his intrinsic worth.

By H. Thompson.—The interests of the soil and its protectors—a more *holy alliance* was never known.

By Col. T. Emory.—The memory of John Taylor, of Caroline—immortal in the annals of agriculture.

By W. F. Redding.—La Fayette—and the glorious principles with which his name will be forever identified.

By John Patterson.—The American Farmer—the best and cheapest agricultural publication the world has yet produced.

By J. Hollingsworth.—The Army and Navy of the United States—the two arms of our government.

By E. J. Coale.—Our Country—may the face of her soil exhibit, in fruitfulness, a spectacle correspondent to that moral and political beauty which exalts her character among all the nations of the earth.

By Charles Carroll.—John C. Calhoun—the practical agriculturist and enlightened statesman.

By an officer of the Society.—Oliver and Van Rensselaer—*par nobile fratrum* in the cause of humanity and public good.

By James Howard.—Agriculture and commerce, twin sisters of human industry—may their intercourse be that of reciprocal liberality, and may their efforts be always successful.

By Mr. Maxcy.—The people of the United States—their highest eulogium is, that their free institutions suit them, and they suit their free institutions.

By H. G. S. Key.—Bolivar—the Washington of South America.

By J. L. Potts.—The committee on horses—when you meet a *Stranger*, take him in.

By B. W. Hall.—The state of Maryland—may an enlightened policy encourage agriculture.

By J. S. Williams.—The Pennsylvania farmers.

By Attorney General Kell.—The plough and the government—sustaining and sustained by each other.

By Governor Wright.—South America—she has trodden in our footsteps—may she reap our glory.

By R. Hunter.—Robert H. Goldsborough—the friend of man.

By J. S. Skinner.—Our brethren of New England—alike eminent in the use of pen or plough.

SHEEP—No. 3.

Mr. Editor,

In looking over some old papers, I find in one or two articles of the association of the Continental Congress, of the 5th September, 1774, that sheep were considered a matter of great national moment, at that important period, when the colonies, indignant at the aggressions of the mother country, determined to provide for themselves.

"Art. 7th. We will use our utmost endeavours to improve the breed of sheep, and increase their number to the greatest extent; and to that end, we will kill them as sparingly as may be, especially those of the most profitable kind; nor will we export any to the West Indies, or elsewhere; and those of us who are, or may become overstocked with, or can conveniently spare any sheep, will dispose of them to our neighbours, especially to the poorer sort, on moderate terms.

"8th. That we will, in our several stations, encourage frugality, economy and industry, and promote agriculture, arts, and the manufactures of this country, especially that of wool," &c. &c.

Thus you perceive, sir, that the venerated sages of the ancient time, considered the sheep as of high national import, and its uses as a grand essential, toward obtaining for us a redress of our grievances, or preparing us for the *care of ourselves.*

In perusing the work of the celebrated Luccock on Wool, I find that the Persian sheep, the race with which I commenced my improvements twenty-three years ago, are of very great antiquity. The author observes—

"The first flock (which is minutely described,) was found about seventeen hundred and sixty years before the Christian era, in Mesopotamia, or that part of Persia which lies between the Euphrates and Tigris. It was perfectly domesticated, consisting of both goats and sheep, the former of which were black, and the latter a brown colour."

The Persian sheep imported to America at this late time of day, are remarkable for a brown colour in the lambs, when first yeaned, and a considerable rim around the eyes of the grown sheep, of a brown coloured appearance.

Speaking further of those very old times, L. continues—"In Persia, where the dominion of luxury was the most absolute, after the manufacture of woollens had been generally adopted, the materials were produced of the most perfect form, and the workmanship obtained a degree of excellency beyond the competition of rivals." Again, in speaking of the production of fine wool, the author remarks—"The temperature to which sheep are exposed, has long been considered as one of the prime agents in the production of fine wool. This valuable substance, was found to abound most in countries which enjoy the influence of a mild and generous climate, exposed neither to the oppressive heat of the torrid zone, nor to the chilling winds of the frigid. The best fleeces are grown in Spain, Italy, and Persia, countries which lie under almost the same parallels, and enjoy a temperature sufficient to maintain that copious and regular perspiration of the animal, which is undoubtedly favourable to the production of good qualities in wool, although not absolutely essential to the fineness of the pile."

So much for this philosopher, whose researches certainly went far enough to obtain the golden fleece, or to ascertain the time when the old folks substituted a good woollen garment for the fig leaf. Let us look into matters a little nearer home. Chancellor Livingston, in a very interesting correspondence, which he did me the honour to have with me after his return from Europe, expressed his surprise, that "the sheep of Persia should have good wool, as the great heat of the climate, he presumed, would render it hairy rather than soft," but supposed that toward the Gulph of Ormus, and the borders of the Caspian, the temperature might be lessened by the adjoining waters, and a good woolled race prevail. As I have before observed, the Persian sheep sent to Mount Vernon, were by no manner of means entitled to any rank as fine woolled sheep. The length of the wool, the goodness of the form, and general beauty of the animals, were certainly great desiderata in this country, where all such properties were so much wanted.

But a single lamb, was offered at the first Arlington sheep shearing of 1805. He was bred by Col. Lee, of Coton, in the county of Loudon, weighed alive about 140 lbs. and sheared 12 lbs. 5 oz. of clean and good wool. He was a lengthy sheep, with short legs, and without horns. Col. Lee was one of the very few southern agriculturists who had paid particular attention to any kinds of stock, (horses excepted.) The sheep of Virginia were, generally speaking, of the race sent here before the prohibition by the mother country, with the exception of a few Irish sheep, which had been smuggled in since the revolution.

Wool being but a secondary consideration, size and fat were principally attended to. The Irish strangers were said to be large and fine sheep, but their race was but partially extended in Virginia. The Curracoa were very much in request, from the superior mutton which they yielded—mutton being in those days more marketable than wool.

Respectfully, yours,

GEORGE W. P. CUSTIS.

Arlington House, 4th June, 1825.

AGRICULTURAL PROSPECTS.

Allentown, N. J., June 4, 1825.

Dear Sir,

Our agricultural prospects are uncommonly flattering. The rye has advanced rapidly since the late rains, and will much exceed, if it fill well, the average crop. Wheat is remarkably fine, and the grass heavy. I have never before seen as much white clover, the fields being literally whitened with it, and its perfume diffused every where.

Your friend and serv't.

GEO. HOLCOMBE.

J. S. Skinner, Esq.

MISCELLANEOUS.

ON SUBSTITUTES FOR WOAD.

Substitutes for woad are continually offered to our dyers. A few years since a small two shilling pamphlet was sold at the enormous price of one hundred dollars, professing to contain directions for a substitute for woad. Much secrecy was observed by the author, and unfortunately the mode of dying recommended by him prevailed throughout the United States. The secret consisted in preparing a strong decoction from bran, madder, and hops, vegetable ferments that had ever been used by European woad dyers. The fermentation of the vat was regulated with potash, the whole process being the common silk vat of Europe. So long as this mode of dying prevailed, the American blues were in disrepute, the colours being dull, and ever liable to wear white in the seams, and in other parts subject to friction.

We would reasonably suppose that the fatal result of the first substitute, would make our dyers very guarded in adopting others: but the predilection for substitutes appears to be so insuperable, that another is no sooner offered than it is brought into practice, and this without any advantage in price or colour. The article now adopting is called the milk weed woad. As it must be highly injurious to our infant manufactures to pursue a wrong course in the production of so leading a colour as blue, I have thought it may not be amiss to offer some remarks on this new substitute.

Woad acts as a colouring matter and as a vegetable ferment; the latter brings the indigo used with it to a reaction, and enables it to colour; but this fermentative property is only a secondary object, its principal value consisting in the great permanency of its blue colour; and were it not for this property, any common succulent vegetable, manufactured in the same way, would answer every purpose of woad. A substitute, therefore, to be effective, must contain as much blue as woad, and of equal permanency. The only question interesting to our dyers is, whether the milk weed contains this valuable colouring matter—if it does, both in degree and quality, it will no doubt be a good succedaneum; but if it should not, the using it as a substitute must prove highly injurious to those who employ it under that impression.

None but practical woad dyers can be aware of the great importance of the permanent blue colour obtained from the woad. When a woad vat is new, the dyer is careful to keep it pretty well supplied with indigo, in order that the colouring matter of the woad may not be spent too soon; for he well knows that when the natural colour of the woad is gone, the blues dyed afterwards will not possess the same permanency, though to appearance the colours will be equally good. Those dyers succeed the best who have three or more vats in operation at the same time; in fact, the greater number of vats a skilful woad dyer works, the more permanent his colours will be. A dyer who begins with eight vats, will set two every month, in order that he may have half of them strong of woad. The wool is first partially coloured in the newest vats, and finished in the older ones, in order that it may be first impregnated with the colouring matter of the woad, by which the permanency of the blue is secured.

In every species of the isatis, or of the indigofera, when the plants at maturity are gathered, pounded and balled, they will change to a bluish green, the change being the effect of an oxidizement of the indigo contained in the plants. After the balls of woad are couched, a fermentative process necessary to its perfection, the blue will become darker, having combined with a farther portion of oxygen. As this change takes place, invariably, in all plants known to contain indigo, it is considered the only external character by which the dealer can judge of the strength and value of woad, those samples containing the most indigo assuming the darkest and bluest shades of green. I have seen several samples of milk weed, manufactured after the same manner as woad, and no such change takes place—the vegetable becomes lighter instead of darker; it loses that light green colour natural to the living plant, and assumes a pale dead yellow. It has been said by some, that the milk weed contained more indigo than woad, but I am convinced by its appearance, when couched, that it does not contain a single particle of blue colouring matter.

Milk weed being a very succulent plant, possesses strong fermentative properties, and may be advantageously used in place of bran and madder, to assist in fermenting the woad vat, but never can be employed as a substitute for it. It is sold, in a prepared state, at from 7 to 9 cents per lb. Those country manufacturers who are using it, may save half this expense by collecting the cabbage, spinnage, and other refuse of their gardens during the summer season, and fermenting it after the same manner as woad. Young barley, rye, grass, wheat, or any grain plants, cut whilst in their most succulent state, would be fine substitutes for the milk weed, and would answer quite as good a purpose. But where would be the advantage of using these substitutes, when a greater crop of woad can be raised on a given quantity of land, than can be produced from any other plant?

In making these remarks I have not the most distant idea of checking the spirit of inquiry. My only view is to put our dyers on their guard against adopting new things before they are certain of their answering, at least as well as the old ones. If an indigenous plant can be found possessing all the properties of woad, that will afford as great an annual crop, I would be the first to recommend it; but should our dyers pursue a wrong course for years before the error is discovered, as was the case with the swill woad, fatal, indeed, will be the effect on our rising manufactures. Hopson.

The Vine in France.—France, says the Journal du Commerce, possesses in her vineyards, mines of wealth, of an inestimable value; and the advantages which they furnish her are owing to natural causes which secure to her a superiority in this respect which no other nation can dispute. The annual products of her vintage amount to seven or eight hundred millions, yielding a subsistence to one-third of the population, and about eighty millions of francs for foreign export. On account of the heavy duties laid upon French wines by other governments however, a great part of the advantages which might be derived from their exportation are prevented, particularly by England. The convention of Methuen loaded the wines of France with a duty one-third higher than those of Portugal, and thus conferred on the Oporto company the monopoly of supplying Great Britain.

The number of *wine makers* has increased in England in proportion to the multiplication of duties; and ever since the year 1687, the importation of French wines has been gradually diminishing, and has now decreased from twenty thousand barrels to one thousand, and even a part of that is re-exported. This state of things is intimately connected with the migrations of gentlemen who go to visit or reside on the continent; and exorbitant duties paralize the public revenue, when a great consumption would cherish and increase it.

"The proposition made by Mr. Huskisson," remarks the French editor, "for the reduction of the duties on foreign wines to one-half, which was received with such pleasure in the House of Commons, must produce equal gratification in those departments of France where the vine is cultivated. The period when the commercial treaty between England and Portugal is to be renewed, seems a favourable opportunity for the abandonment of a system produced by passion and national dislike, and which has long been disapproved by the greatest English economists. [*N. Y. Daily Advertiser.*

Vegetable Poison.—A case of accidental poison by *wild parsnip*, occurred in this town yesterday, which came near proving fatal to two boys, one an apprentice in this office, 15 years of age; the other, a son of Capt. John Robinson, 6 years old. The parsnips were taken from an old garden between King-street and Hancock-street, on low and wet land, which appears not to have been much cultivated for some time past. The boys supposed them to be *artichokes.* The youngest boy was found, about an hour after they had eaten the parsnips, in convulsion fits. The oldest boy walked about nearly two hours, when he became so weak that he could hardly walk, was in great distress, and gave information that he had eaten something which he was afraid was poison. He grew worse fast, could not sit up straight, complained of violent burning in the stomach, vomited, sunk into a stupor, medical aid arrived, immediately administered a glass of sweet oil, patient fell into a violent convulsion fit, which lasted from five to ten minutes; powerful emetics were then forced down with great difficulty, the patient struggling and making all the resistance in his power. After sufficient medicine had been administered to throw the vegetables from the stomach, he began to revive, though for some time considerably inclining to stupor. Both of the boys appear likely to recover. A third boy, who dug the parsnips and gave them to the other two, ate some, but was not affected by it.

We have heard it said that the common garden parsnip, if left to stand some years and grow spontaneously, will become poison. This subject is worthy of examination. We understand that some scattered parsnips were seen to grow last year in the garden near where these poisonous vegetables were dug. We have examined some of these roots; they considerably resemble the common parsnip, and have a slight taste like the parsnip, but their smell is very similar to that of the common garden plant called lovage. [*Maine paper.*

Economy in Candles.—If you are without a rush light, and would burn a candle all night, unless you use the following precaution, it is ten to one an ordinary candle will gutter away in an hour or two, sometimes to the endangering the safety of the house.—This may be avoided by placing as much common salt, finely powdered, as will reach from the tallow to the bottom of the black part of the wick of a partly burnt candle; when, if the same be lit, it will burn very slowly, yielding a sufficient light for a bed chamber; the salt will gradually sink as the tallow is consumed, the melted tallow being drawn through the salt, and consumed in the wick. Economist.

The noble *Elm* which adorns Boston Mall, measures 65 feet in height, 21 feet in circumference, and the branches extend 86 feet!

Manchester.—There are about *thirty thousand* power looms in the district immediately surrounding Manchester, England, which give employment and subsistence to more than *two hundred thousand* persons! and these 200,000, on account of materials used, and food, &c. consumed, *directly* employ at least as many persons more.

The exports of British manufactures in 1822, amounted to 45,787,389*l.*—in 1823, to 46,261,511*l.*, and in 1824, to 50,758,808*l.*

RECIPES.

COMPOSITION FOR PRESERVING WEATHER-BOARDING, PAILING, AND ALL OTHER WORKS LIABLE TO BE INJURED BY THE WEATHER.

Lime, it is well known, when well burnt, will soon become slacked by exposure in the open air, or even if confined in a situation not remarkably dry, so as to crumble, of itself, into powder. This is called *air-slacked* lime, in contradistinction to that which is slacked in the usual way, by being mixed with water. For the purpose of making the present useful composition, to preserve all sorts of wood work exposed to the vicissitudes of the weather—take three parts of this air-slacked lime, two of wood ashes, and one of fine sand—pass them through a fine sieve, and add as much linseed oil to the composition, as will bring it to a proper consistence for working with a painter's brush. As particular care must be taken to mix it perfectly, it should be ground on a stone slab, with a proper muller, in the same manner as painters grind their white lead, &c. But where these conveniences are not at hand, the ingredients may be mixed in a large pan, and well beat up with a wooden spatula. Two coats of this composition being necessary, the first may be rather thin; but the second should be as thick as it can conveniently be worked. This most excellent composition for preserving wood when exposed to the injuries of the weather, is highly preferable to the customary method of laying on tar and ochre. It would be much improved by melting one half of coal tar with the linseed oil.

SUBSTITUTE FOR MAHOGANY.

The difficulty of procuring mahogany, and other precious woods, and the consequent exorbitant prices demanded for ordinary articles of family convenience, has occasioned the art of the chymist to be applied to a subject peculiarly calculated to promote domestic embellishments, at a trifling expense.

It has been contrived to render any species of wood, of a close grain, so nearly to resemble mahogany in the texture, density, and polish, that the most accurate judges are incapable of distinguishing between this happy imitation and the native produce. The first operation, as now practised in France, is to plane the surface so as to render it perfectly smooth. The wood is then to be rubbed with diluted nitrous acid, which prepares it for the materials subsequently to be applied. Afterwards, one ounce and an half of dragon's blood, dissolved in a pint of spirits of wine, and one-third of that quantity of carbonate of soda, are to be mixed together and filtered, and the liquid in this thin state is to be rubbed, or rather laid upon the wood with a soft brush. This process is repeated, with very little alteration; and in a short interval afterwards the wood possesses the external appearance of mahogany. When this application has been properly made, the surface will resemble an artificial mirror but if the polish becomes less brilliant, by rubbing it with a little cold drawn linseed oil, the wood will be restored to its former brilliancy.

GERMAN METHOD OF MAKING ELM AND MAPLE WOOD RESEMBLE MAHOGANY.

Having very smoothly planed whatever boards of the elm or maple tree, are intended for the purpose of appearing like mahogany, wash them well with a little aqua fortis diluted with common water; then take a few drachms of dragon's blood, according to the quantity which may be wanted in the whole, with half as much alkenet root, and a quarter of as much aloes, and digest these ingredients in four ounces of proof spirits to every drachm of the dragon's blood; as soon as the boards are dry, varnish them over with this tincture, by means of a sponge or soft painter's brush; and they will, it is said, ever after, so wear the appearance of mahogany as to deceive the eye of any indifferent observer.

TO PRESERVE GAME.

When fresh killed, observe to put tow into the mouth and upon any wound they may have received, to prevent the feathers being soiled, and then wrap it smooth at full length in paper, and pack it close in a box. If it be sent from a great distance, the entrails should be extracted, and the cavity filled with tow dipped in rum or other spirit.

The following mixture is proper for the preservation of animals: one pound of salt, four ounces of alum, and two ounces of pepper, powdered together.

TO SOFTEN IVORY AND BONES.

Take sage, and boil it in strong vinegar; strain the decoction through a piece of close cloth; and when you have a mind to soften bones or ivory, steep them in this liquor, and the longer they remain in it, the softer they will grow.

SPORTING OLIO.

Richmond Jockey Club Races.

Over the Tree Hill Course, commenced on Tuesday, the 10th May.

First Day.—Sweepstakes for 3 years old, entrance $100, half forfeit, mile heats.

	Heats.		
Theophilus Field's b. c. Gohanna, by Sir Archy, ...	3	1	1
J. J. Harrison's b. c. Bozzarus, by Sir Archy, ...	2	2	2
W. R. Johnson's s. c. Tickler, by Timoleon, ...	1	3	3
J. M. Selden's b. c. Nameless, by Herod, ...	*distanced*		

Time—1st heat, 1 m. 55 s.—2d heat, 1 m. 53 s.—3d heat, 2 m.

Second Day.—Proprietor's Purse $300, three mile heats.

J. J. Harrison's b. h. Aratus, 5 years old, by Director, ...	1	1
Wm. R. Johnson's s. m. Rosette, 4 years old, by Sir Archy, . . .	2	5
Theophilus Field's s. m. Phillis, 4 years old, by Sir Archy, . . .	5	2
Thomas Carter's s. g. Tom Tough, aged, by Tom Tough, . . .	4	3
J. B. Christian's s. g. Sir John, aged, by Florizel, ...	3	4

Time—1st heat, 6 m. 2 s.—2d heat, 5 m. 59 s.

Third Day.—Jockey Club Purse, $1,000, four mile heats.

Wm. Wynn's b. m. Flirtilla, by Sir Archy, ...	1	1
John Minge's b. g. Doctor, six years old, by Francisco, ...	3	2
Wm. R. Johnson's b. m. Betsy Richards, aged, by Sir Archy, . .	2	3

Time—1st heat, 8 m. 1 s.—2d heat, 8 m. 22 s.

Fourth Day.—La Fayette Barouche stake—for 3 years old.

J. J. Harrison's b. c. la Fayette, by Virginian, ...	1	1
J. Minge's b. f. Eliza White, by Sir Archy, ...	2	dist.
J. M. Selden's b. c. Nameless, by Herod, ...	3	dist.

Time—1st heat, 1 m. 54 s.—2d heat, 1 m. 56 s.

New Market Spring Meeting—May, 1825.

First Day.—A Sweepstakes, for 3 year old colts and fillies, carrying 86 lbs. each, one mile heats, half forfeit.

	Heats.		
Allen James' b. h. Leonidas, by Virginian, 3 years old, ...	2	1	1
Wm. R. Johnson's b. f. Little Betsy, by Sir Archy, 3 years old, . . .	1	2	2
Theo. Field's b. h. Rockingham, by Sir Archy, 3 years old, . . .	3	3	dist.
Thomas Graves' b. f. by Cicero, .	paid forfeit		
John Minge. Jr's s. f. by Sir Hal, .	do.		
Wm. Wynne's, Jr's b. c. by Sir Archy,	paid forfeit.		

Time—1st heat, 1 m. 55 s.—2d heat, 1 m. 55 s.—3d heat, 1 m. 58 s.

Second Day.—Proprietor's Purse, three mile heats. $300—entrance $15.

Thomas P. Hare's s. f. by Sir Archy, 4 years old, carrying 97 lbs., . .	2	4
Wm. R. Johnson's s. h. Janus, by Sir Archy, 4 years old, 100 lbs., . .	4	3
B. Cobb's s. f. Atalanta, by Sir Hal, 4 years old, 97 lb., ...	drawn	
J. J. Harrison's s. m. Nancy Warren, by Timoleon, 5 years old, 107 lbs., ...	1	1
Wm. Wynne's b. f. Isabella, by Sir Archy, 4 years old, 97 lbs., . .	3	2

Time—1st heat, 6 m. 17 s.—2d heat, 6 m. 10 s.

Third Day.—Jockey Club Purse, four mile heats, $700; entrance $20.

Wm. Wynne's b. m. Flirtilla, by Sir Archy, 5 years old, 107 lbs., . . 1

Wm. R. Johnson's b. h. Arab, by Sir Archy, 5 years old, 110 lbs.,—proved sullen, kicked, and would not run.

Fourth Day.—The Annual Post Stake, three mile heats—$100 entrance, play or pay.

Wm. R. Johnson's b. m. Betsy Richards, by Sir Archy, 7 years old, 121 lbs., ...	2	2
J. J. Harrison's b. h. Burstall, 4 years old, 100 lbs., ...	1	1
Theo. Field's s. m. Mary Wasp, 4 years old, 97 lbs., ...	dist.	

Wm. Wynne—nothing to run.

Time—1st heat, 5 m. 59 s.—2d heat, 5 m. 57 s.

Lawrenceville Spring Races—1825.

First Day.—Sweepstake, mile heats—$200 entrance, half forfeit.

	Heats.		
Theophilus Field's b. c. Gohanna, by Sir Archy, ...	4	1	1
Wm. Rice's b. c. la Fayette, by Virginian, ...	1	2	2
Wm. R. Johnson's b. f. by Sir Archy	2	3	3
H. G. Burton's r. f. by Sir Archy, .	3	4	drawn
Wm. Wynne, Jr's s. f. by Sir Archy	5	5	drawn
James G. Green's s. c. by Sir Archy	.		forfeit
A. B. Drummond's f. by Napoleon .	.		forfeit
Henry Clay's b. k. f. by Sir Archy	.		forfeit
James J. Harrison's b. c. by Virginian, ...	.		forfeit
Trent Eggleston's b. c. by Sir Hal,	.		forfeit

Time—1st heat, 1 m. 53 s.—2d heat, 1 m. 57 s.—3d heat, 2 m. 3 s.

Second Day.—Old Spring Club Purse, two mile heats—$230.

James J. Harrison's b. k. c. Aratus, by Director, ...	2	1	2	1
Wm. Wynne's b. f. Isabella, by Sir Archy, ...	3	3	1	2
Wm. R. Johnson's s. c. Janus, by Sir Archy, ...	1	2	3	3
Wm. West's Outlaw, by Constitution, ...	4	4	distanced	

Time—1st heat, 4 m. 23 s.—2d heat, 3 m. 55½ s.—3d heat, no report—4th heat, 4 m. 5½ s.

Third Day.—Proprietor's Purse, two mile heats—200 dollars.

James J. Harrison's b. h. Burstall, by Shylock, ...	1	1
Theophilus Field's g. g. Mark-Time, by Gallatin, ...	2	2

Time—1st heat, 4 m. 3 s.—2d heat, 4 m. 10 s.

Fourth Day.—New Jockey Club Purse, four mile heats—690 dollars.

Wm. Wynne's Flirtilla, by Sir Archy	1	1
J. J. Harrison's Aratus, by Director	2	dist.
Thomas Watson's Chimborazo, by Sir Archy, ...	3	drawn

We are requested to state, that the stake was lost to la Fayette by mismanagement; that it is the general opinion he could have won it easily. And. also, the race won by Aratus was the best two mile race that has been run at Lawrenceville for many seasons, if ever there was a better; that Aratus had both the others to run down; and that he was started for the club when too feeble to run, not having recovered the hard race (two days before,) of four heats.

POETRY.

PRIZE ADDRESS,

Written by Thomas Wells, Esq., of Boston.

The Albany Theatre was opened on Wednesday evening last, to a crowded and fashionable audience. The following address, to which the prize was awarded, was spoken, with great effect, by Mr. Barrett:

When Superstition captive Reason led.
And Taste proscribed, her bowery dwellings fled,
Their sacred haunts exiled, the Aonian maids
On hurrying wing forsook the peaceful shades:—
The crumbling column, and the tottering fane,
A round, of desolation marked the reign.
In towering pride where stood the classic dome—
The boast of Art, and once the Muses' home,
'Midst mouldering ruins wheeled the drowsy bat,
And cloistered there the bird of darkness sat;
The infatuate mind the mystic sceptre swayed,
Man groped in darkness, and the spell obeyed;
Thus wrapped in gloom expired the Attic light,
And Priestcraft ruled sole monarch of the night—
At length triumphant o'er his bigot foes,
Genius, on bold adventurous plumes, arose;
Athwart the sunless void new warmth he poured.
Pierced the dense clouds, and heaven's blest beams restored.
So from the East, on purple pinions borne
Through flakes of fog, up springs the herald morn:
Lost in the emerging glories of the day,
The dull, cold mists of midnight, melt away.
The harmonious choir, now gave to Joy the shell;
Now rose their temples where their altars fell:—
From shore to shore the voice of freedom spoke,
And buried Learning from her slumbers woke;
Reason unfettered, Truth divine unsealed,
And old Imposture to the world revealed;
Conceived in Beauty, by the Graces nursed,
The germs of Fancy into being burst;—
Toil tilled the glebe—the axe the forest bowed—
Art winged the shuttle—Skill the ocean ploughed—
Life breathed in marble—warm the canvas glowed,
And gifted lips with inspiration flowed:—
Led by Ambition, and by Worth revered,
The Drama then in lettered grace appeared;
From hidden stores her golden lore she brought,
And morals mended, as she manners taught;
Through every page of varied life she ran,
Her volume Nature, and her study Man;
Where'er she moved, the Muse the land refined,
And Taste adorned, as Science nerved the mind;—
On every side, to birth, new beauty sprung,
The laurels flourished, and the minstrels sung;
As knowledge guided—Bards inspired the age,
And pictured Wisdom lessoned from the stage;
Truth fearless spoke, in scenic garb arrayed,
And rescued Virtue owned the Drama's aid.

And now, auspicious dome, aspiring pile,
The Artist's pride—be thine the people's smile!
The nurse of Genius, and of Taste the seat—
We hail thy birth, thy dawn of promise greet.
Priest of thy rite—Apollo claims thy shrine,
To him devoted—hence live thou and thine!

Patrons! who here the unbiassed censors sit,
Sole arbitrators in the court of wit;
Whose sentence stamps the buskin and the play,
Whose laws alike the song and scene obey;
To your indulgence now we make appeal,
On you dependent rests our future weal;
And here by your impartial voices tried,
We rise or fall, as you alone decide—
In you confiding, hence we trust our cause,
To us your smiles extend—our meed is your applause.

THE FARMER.

Baltimore, Friday, June 10, 1825.

The Editor feels the necessity of asking the indulgence of the Board of Trustees and the members of the Maryland Agricultural Society, and of his readers generally, for the very imperfect and desultory sketch of the late Cattle Show, which is presented in this number. Being compelled to set out at 5 o'clock the morning after the show, in order to arrive on Monday at West Point, as one of the Board of Visitors to that academy, under an invitation from the War Department, he had to arrange and prepare all the papers while surrounded and confused by the noise and bustle that may be imagined to prevail in a large moving hotel, filled with travellers.

It is quite probable that some material incident or circumstance may have been omitted, and that some inaccuracies, as well in phraseology as in fact, may have been committed—and should it so appear, the best amends will be made by correcting all errors, when discovered or pointed out.

☞It is gratifying to have it in our power to state what fell under our observation at the late Cattle Show, that improved domestic animals of every kind, are rising in demand and value—especially improved cattle, both of country and imported blood.

☞The display of Stallions at the late Show was uncommonly numerous. There were no premiums offered for colts, or there would have been no difficulty in bestowing them, except in distinguishing between the beauty and fine figure of several on the ground. Amongst these were a colt belonging to Col. T. Emory, by Silver Heels, a perfect picture of beauty and symmetry, and a two year old colt sent by Mr. Vanbrugh Livingston, of New York—he was by Bussorah, out of a Duroc mare. For such horses, those who value fine blood and fine figure, could not pay too much.

Tobacco.—Total number of hogsheads inspected in the three state Warehouses, for the last two weeks, 2,020.

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Account of the late Annual Cattle Show, held by the Maryland Agricultural Society, with the Reports and awards of the committees appointed to distribute the Premiums, and the Volunteer Toasts drank on the occasion—Essay on Sheep, by G. W. P. Custis, Esq, No. 3—Agricultural Prospects—On Substitutes for Woad—The Vine in France—Vegetable Poison—Economy in Candles—Elm in Boston—British Exports—Receipes—Official account of Races at Richmond, New Market, and Lawrenceville—Poetry, Prize Address, by Thomas Wells, Esq., of Boston—Editorial—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	7	9		
COFFEE, W.I. Green, .	—	16½	17	20	25
do. Common,	—	16	16½	18	26
COTTON, Louisiana, &c.	—	22	26		
Georgia Upland, . . .	—	22	24		
COTTON YARN, No. 10,	—	45			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	11	12
CHEESE, ...	—	5	8	10	12
FEATHERS, Live, . . .	—	35	38		
FISH, Herrings, Sus. new	bbl.	2 18		2 25	
Shad, trimmed, new,	—	6	6 50	7 00	
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	5	5 50	6	6 75
Fine, ...	—	4 62			
Susquehanna, superfi.	—	4 75	5		
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	43	45		
Wheat, White, ...	—	1 05	1 10		
do. Red, ...	—	95	1 00		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, ...	—	3	3 25	3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	9			
LEATHER, Soal, best,	—	24	27		
Eastern Tan, ...	—	13	20		
MOLASSES, Havana, .	gal.	27	33	37	50
MEAL, Corn, kiln dried.	bbl.	2 37			
NAILS, 8a20d.	lb	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 62		1 75	
Pitch, ...	—	1 50	1 75	2	
Turpentine, Soft, . .	—	3			
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 50	4		
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	23	23½	37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—	28	50		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	10 25			
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Claret, ...	doz	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

ON IMPROVING THE NATIVE BREED OF NEW ENGLAND CATTLE.

No. II.

In the preceding number I introduced an account of the very extraordinary New England cow, which has been distinguished by the name of the *Oakes cow*. I now present a brief statement of an unequalled English cow, the property of Mr. Cramp, of Sussex county: *a cow not of either of the highest improved English breeds—long horns or short horns; but of the proper old Sussex breed*, which, Marshall says, very much resemble the Herefordshire cattle. For a minute detail of her treatment and of her products in milk and butter, during five years, I must refer the reader to the Massachusetts Agricultural Repository and Journal, vol. iv. No. 4.

Mr. Cramp's experiments commenced in May, 1805, and appear to have been carefully registered. In the first year, reckoning from the day she calved, she yielded—

		quarts of milk.	*lbs of butter.*
In 48 weeks,		4921	540
2d year, in 45 weeks,		4137	450
3d year,	51½ “	5752	675
4th year,	42½ “	4219	466
5th year,	48 “	5369	594

[*Note.*—In the fifth year the cow had twin calves, which were suckled 9 weeks; during which time no butter was made from her milk, although she gave 364 quarts more than the calves sucked. But this surplus milk, Mr. Cramp says, threw up very little cream, and that was poor; and though many long and patient trials were made, no butter could be obtained from it, whether this milk was taken from her before or after the calves had sucked. At the end of nine weeks, the calves were sold for 12*l.* 12*s.* ($56,) and then the making of butter commenced and continued 48 weeks.]

It seems that Mr. Cramp was keeper of the prison in Sussex, within the walls of which, on 70 rods of ground, he sowed red clover, white clover, lucerne, rye-grass and cow-grass, and some carrots. The crops of lucerne were cut four times, and the lover three times during the season, producing eac time good crops. The cow was not allowed to eed on the grass ground; but all these green crps were cut and given her in a rack in her hovel, were she had a plat of about 18 square rods to rang in. He kept but that one cow, and always milke her himself, being particularly careful to milk h regularly and *clean.* He says, “milch cows are en spoiled for want of patience at the latter en of milking them.” This, unquestionably, is a mark alike correct and important. Every farm knows that when it is intended to *dry a cow* that giving milk, some is left in her bag at every ming, and more and more, until she ceases to be mild. From this well known fact, it is to be inferre at the leaving any portion of her milk, howeve nall, undrawn, tends to the same result. But be es the daily loss of milk, and the earlier *drying* of the cows, by such careless milking, there is atural diminution of butter. By careful experi its, Dr. Anderson ascertained, that the last cu milk drawn from the cows, (the “strippings,”) ded, on an average, ten times as much butter he like cup of milk first drawn. In one cow it s 16 times as rich in butter.

In the summer season, cow was fed on the crops above mentioned, e or four times a day, and at noon, with abou r gallons of grains and two of bran, mixed t er; Mr. Cramp always observing to give her ore food than she ate up clean. In the winter n she had hay, grains and bran, mixed; he feed er often—five or six times a day, giving her t hen milking; keeping the manger clean where she was fed with grains, (brewers' grains of malted barley, which are always very moist,) not to let it get sour. *He washed her bag at milking three times with cold water, winter and summer.* Where grains and pollard* cannot be had, (says Mr. Cramp,) milch cows should have a little nice hay, once a day, to keep them in a proper state; otherwise all green food would make them too loose. “Often changing food is good for milch cows.” It is not, I presume, the mere act of *changing* their food that is beneficial; but their stomachs are *cloyed* if their food is not varied. The *appetite* is increased by the change, and they will *eat more,* and give milk in proportion. I understand him to say that he commonly changed his cow's food every time he fed her; and he thus concludes his details: “I feed my cow six or seven times a day.”

The moderate quantities of butter noted in the preceding number, as stated from Young's Northern Tour, were produced, for the most part, by the short horned, or Holderness breed of cows, probably of Dutch extraction. Of this breed, Mr. Marshall, in his Rural Economy of Yorkshire (printed in 1788,) gives the following description. “A thick, large-boned, coarse, clumsy animal, remarkably large behind, with thick gummy thighs, always fleshy, but never fat; the flesh being of bad quality. This, however, was not the worst; the monstrous size of the buttocks of the calf was frequently fatal to the cow. Numbers of cows were annually lost in calving.” And of this breed, as then propagated in Yorkshire, he says—“It is a fact, that short horn cows seldom calve without assistance.” And when the hour of calving is apparently at hand, they are diligently watched; the person having the care of them frequently rising in the night; and sometimes sitting up the night through. Of these cattle Mr. Marshall remarks: “The unprofitableness of this ‘*Dutch breed* being evident, men of discernment began to set about improving it. In the course of the last twenty years the bone has been lowered, the hind quarters reduced, and the flesh and fatting quality very much improved; *not by foreign admixtures and unnatural crossings, but by choosing the cleanest and best fleshed bulls and heifers from among their own or their neighbour's stock.*” The still later improvements of the short horned breed, it is to be presumed, have remedied the evil above mentioned, which proved fatal to many cows in calving, and rendered *assistance* unnecessary.

Mr. Marshall† says—“The Herefordshire breed of cattle, taking it all in all, may, without risk, I believe, be deemed the first breed of cattle in the island.” “Beside their superiority as dairy stock, the females, at least, fat kindly at an early age; the strongest proof of their xcellency as *fatting cattle.* I have seen three-year old heifers of this breed, (to use a familiar phrase,) as fat as mud; much fatter than any heifers of that age I have seen, of any other breed; the spayed heifers of Norfolk excepted.” And he thought it a misfortune that the spirited breeders of the midland counties in England (at whose head was the celebrated Bakewell,) raised their improved cattle from the long horned race; which, (he says,) “*in a state of neglect,* might, in figurative language, be called creatures without carcass; all horns and hide.” Some valuable improvements in the breed were effected before Bakewell's day; but to so high a pitch of excellence did *he* raise this stock, that Marshall says “his cows were of the finest mould, and the highest quality; and his heifers beautiful as taste could well conceive; clean and active as does. His bull D, at the age of 12 or 13 years, was more active and higher mettled, than bulls in general are at three or four years old.” By his manner of treating them, Mr. Young says his bulls were perfectly gentle.

If from such unpromising originals, Bakewell and his followers, the eminent English breeders, have produced two races of cattle, which are now said to surpass all others of which we have received information, what encouragement does it not offer to intelligent farmers in New England, to set about improving their native breed? Are there not, at this time, in *every township*, some cows, two or three at least, which, if as well fed, would be as productive of butter and cheese as the most highly improved of the long and the short horned breeds? From such superior native cows, selected in every township, and managed with English care and skill, great improvements may be *rapidly and extensively* effected. It will be attended with some extra expense; but the substantial farmers who have the means of purchasing the superior animals, and can give the requisite attention, will certainly be abundantly compensated by the greatly increased value and prices of their improved stock. But they must select *fine bulls* as well as *fine cows*, on which to raise their improvements. Arthur Young mentions an eminent English improver in husbandry (Mr. Turner,) as having obtained a dairy of the true Lancashire long horned cows; for two of which Bakewell offered sixty guineas, *for the purpose of breeding* BULLS *from them.* This was about 60 years ago. Bull calves, from our best cows, should certainly be selected and reared with equal, or rather with greater care, because of their more extensive use, than the females. Bakewell's long horned cattle in his life time, had a higher reputation than any other breed in England. Subsequently, the improved short horned rose in estimation; and, under the *latest* improvements, seem to have gained the ascendancy.

Bakewell's *primary object* in his improvements of cattle, was the production of *beef*—and his *principal* (says Young,) was “to gain a beast that would weigh most in the most valuable joints.” Hence he aimed at reducing the head, neck and bones: and by his skilful selections from his own stock, *and from the stocks of others, where he found animals superior to his own,* he at length obtained *slender heads* and *necks, slender* and *short legs,* and *small bones.* He asserted, says Young, “that the smaller the bones, the truer would be the make of the beast, the quicker she will fatten, and her weight, we may conceive, will have a larger proportion of valuable meat; *flesh* not *bone,* is the butcher's object.” And Sir John Sinclair remarks, that the “celebrated John Hunter (an eminent anatomist,) declared that small bones were generally attended with corpulency, in all the various subjects he had an opportunity of examining.

As to *form*, Sir John justly observes, that “though it is extremely desirable to bring the shape of cattle to as much perfection as possible, yet *profit* and *utility* ought not to be sacrificed for mere *beauty,* which may please the eye, but not fill the pocket; and which, *depending much upon caprice,* must be often changing.”* Farther, as to form, he says, that it should be compact, and no part disproportioned to the other; and the whole distinguished by a fulness and roundness of shape; that the chest should be broad, no animal with a narrow chest being easily made fat. And Mr Cline (an eminent surgeon in London,) is quoted by Sir John as stating, “that the lungs of an animal are the first object to be attended to, for on their size and soundness the health and strength of the animal principally depend;" hence the importance of attending to the size and form of the chest (in which the lungs and heart are lodged,) and to its breadth in particular. And that the muscles and tendons should be large, by which an animal is enabled to travel with greater speed; and, he might have added, to exert superior force in every kind of labour. Bakewell's cattle were round bodied; the ribs springing from the chine almost horizontally; and hence giving a broad and flat back. I will add, that the best milking cows that I have seen, were deeper in the body immediately before the hind legs, than immediately behind the fore legs. I believe this was very apparent in the Oakes cow.

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* *Pollard,* is the inner husk of wheat; the same which in Pennsylvania is called *shorts*, separated, in bolting wheat meal, from the outer husks or bran.

† Rural Economy of Gloucestershire, printed in 1789, vol. 2, p. 226.

* Sir John (Code of Agric. p. 87,) mentions the late Mr. Davis, the reporter of the husbandry of Wiltshire, whom he pronounces to have been one of the ablest agriculturists that England had produced, as lamenting “that Wiltshire farmers had that ‘pride of stock’ which induced them to prefer *beauty* and *size* to *utility* and *profit.*” Are not some American farmers, lovers of husbandry, falling into the same error?

Should the intimation now given, of the most expeditious means of improving in the first instance, our native breed of cattle, be acceptable to our farmers, and be adopted in practice, a higher improvement may soon be expected, by the exhibition of the improved animals at the County and State Cattle Shows. There we may expect to find some individuals, possessing the requisite qualifications to become skilful and successful breeders, like Bakewell and his followers in England; and who, like them, ready to give adequate prices for fine animals, will ultimately be amply rewarded by an increasing demand, and the continually growing prices of their superior stock.

I am happy in being able to quote the opinion of Mr. Lowell, President of our State Society, corresponding with my own on the subject under consideration. He says—"Possessing, as we unquestionably do, the materials among our own stock, of improving our breeds by careful selection, we should follow the example of Bakewell and other British farmers, who in fifty years have raised the stock of Great Britain to a state of perfection little short of what it is supposed they can ever reach."* On another occasion the President said—"Care in selection and in rearing our animals, would soon have placed us on a footing with any nation in Europe. Our neat cattle were generally good; and individual animals might have been found in New England, which, under the skilful management of such men as Bakewell, and Princep, and Champion, would in twenty years have rivalled either the Holderness or the Herefordshire races." Again Mr. Lowell says, "we repeat what we have often urged, that more is to be expected from excited attention to the improvement of our own stock, than from importation."

Such improvements of our native cattle, so important to our farmers in general, will also be interesting to those who are possessed of fine imported cattle: for if the latter, on full trials, shall be found to be really of greatly superior excellence, improved individuals of our native breed will furnish better subjects for coupling with them; and enable the owners of the imported animals more expeditiously to improve and increase a superior stock, whether for their own use or for sale.

I have mentioned Marshall's opinion of the Herefordshire breed of cattle, taking all in all, as the best in Great Britain. And Sir John Sinclair, after remarking "that a breed of cattle equally well adapted to the butcher, to the dairy and to the plough or cart, is no where to be met with," says, "perhaps the Herefordshire cattle approach the nearest to that perfect state of any of the larger breeds. They arrive soon to maturity, and are fit for *labour*, but it is a different variety of the same breed that is preferred for the *dairy*." At the last cattle show at Brighton, I saw a bull and heifer of the Herefordshire breed—stately animals, sent by Admiral Sir Isaac Coffin, (a native of Massachusetts,) to the Massachusetts Society of Agriculture. The heifer was very large and of fine form; but her bag was very small, and her teats, clustering together, were not bigger than one's little finger. Observing to the President that this heifer would not be a good milker: he answered that her breed was destined for labour and beef. John Prince, Esq., of Roxbury, at whose farm the two Herefordshire animals are now kept, lately informed me that the heifer has never had a calf, nor is likely ever to have one: yet what I suppose rarely happens, she gives a little milk. Probably this is the variety of the Herefordshire cattle mentioned by Sir John Sinclair as adapted to labour and to make beef, while another variety is preferred for the dairy.

"Early maturity," or a disposition to fatten well at an early age, is considered in England as a distinguished excellence. "When animals, bred for the carcass merely, (as Sir John Sinclair remarks,) become fat at an early age, they not only return sooner the price of their food, with profit to the feeder, but in general, also, a greater value for their consumption, [for the quantity of food they consume] than slow feeding animals." On this subject I once took occasion to observe, that "a disposition to fatten at an early age, a point of excellence zealously sought for in England, where husbandry labours are chiefly performed by horses, is not of material consequence to New England farmers, when oxen for the draught and cows for the dairy, constitute their most interesting stock."* I doubt not, however, that many of our farmers have had experience of heifers entering into their third year, and grazing in rich pastures, becoming fat for the butcher in the same season, on grass alone. Sir John Sinclair remarks, that the propensity to fatten at an early age, is a sure proof that an animal will fatten speedily at any other period of life. It is a remark of Mr. Marshall, "that a cow may be so constitutioned as to convert her aliment into milk, while milk is continued to be drawn from her, and, when the draught is stopped, to convert the same current of chyle into fat." And we may well suppose, that cows possessing the faculty of converting their food into milk so rich as to yield an extraordinary quantity of butter, would, when [illegible] fatten faster, and in a higher degree, than cows which had given thin milk, on the same quantity of food. This presents another and very weighty motive, to cherish and propagate that breed of cattle of which the cows are so productive of butter.

T. PICKERING.

SHEEP—No. 4.

Mr. Editor,

At the Arlington Sheep Shearing of 1806, I exhibited a year old lamb, bred from my improved Persian, which was much admired. He was afterwards sent to New Kent county, in the south of Virginia, and no doubt is remembered there: at full growth, he weighed, alive 204 lbs., and his usual shearing was 10 lbs. of clean wool, 14 inches in length.

Next came Mr. Foote's Badger, of the Arlington long woolled race, obtaining the premium, though shown against a sheep of very large size. Badger was about 100 lbs. live weight, but sheared 10 lbs. of wool, of great length and good quality. He was indeed, a sheep on the principle of the celebrated Bakewell, of "small in size, but great in value;" and when standing, his wool appeared to touch the ground. He was sold, shortly after his exhibition, to a gentleman in Frederick county, Virginia. Let us look over a table, furnished by Mr. Foote, of Hayfield, a gentleman deservedly esteemed as a most successful agriculturist, and improver of stock, and we shall be able to judge of the merits of the Arlington long woolled, when compared with the sheep of this and other countries.

"On Saturday last, in the presence of Lawrence Lewis, Esq., I sheared nine ewe lambs of the Arlington long woolled breed—and as the result is not very common, I give it publication:

	Live weight.	*Length of wool.*	*Product of wool.*
First,	85 lbs.	—	5½ lbs.
Second,	78	15 inches	5¼
Third,	100	11	6½
Fourth,	85	8	5
Fifth,	98	11	6¼
Sixth,	78	11	6 6 oz.
Seventh,	70	10½	5¼
Eighth,	78	12	5¼
Ninth,	76	12	6¼

Those were all ewe lambs, which have each produced a lamb, and now suckle them. I also sheared a fat wether, of the *old kind of the country*, which weighed 158 lbs. gross, and produced 5¼ lbs. of wool. Upon applying the impartial and undeviating rules of arithmetic to the above result, we shall find that the Arlington long woolled breed yield a pound of wool to every 14 lbs. 7 oz. gross weight—and that the *old country kind* yield only a pound of wool for every 30 lbs. gross weight. It will be remembered that Badger produced a pound of wool for 10 lbs. 12 oz. of gross weight—a result which, if my information be correct, is not exceeded in any part of the world.

Signed, WM. H. FOOTE.

Hayfield, 17th May, 1808.

The celebrated and favourite ewe, bred at Arlington, called Mary Colston, (of which a portrait has been taken,) did not exceed 100 lbs. in gross weight, and sheared 7 lbs. of washed wool, more than nine inches in length. She appeared like a moving mass of wool, the legs concealed, and the head alone giving animation to the object.

In 1807 and 1808, sheep of the home breeds and of large size, were shown for the premium cups, particularly a lamb bred by Col. Tayloe, of Mount Airy, which weighed alive, at 1 year old, 180 lbs.

About this time a Mr. [illegible]int and a Mr. Young, two very respectable Englishmen, who had been shepherds in Europe, volunteered their services to show the manner of European shearing. Formerly, the habit was, to seize and bind the animal, as if for slaugh[illegible]r; a lusty fellow then kneeled upon the poor st[illegible]ggling creature, and fell to work chopping wool, sk[illegible] and flesh together; and, by way of finishing off s[illegible] accomplished a work, left to the tail a bunch or [illegible]ft of wool, like the tail of a lion. This was consi[illegible]red a matter of taste, and for the animal to keep off [illegible]he flies with.

Since th[illegible] barbarian custom has ceased, the sheep are now sh[illegible] without the slightest confinement; the wool cl[illegible]y and neatly shaved off, by passing the shears r[illegible]d and round the body—and with this shaving, [illegible]ere is no usury taken of flesh or blood.

The premiu[illegible]r the first American fabric shown at the Arlingto[illegible]heep Shearing, was adjudged to a Miss Field, of [illegible]fax county, who spun and wove it herself. It wa[illegible]ite a pretty thing—a piece of jeans twilled, and [illegible] presented to the President of the United States, [illegible]be worn on the day of Independence. It was [illegible]omary for the guests at the meetings to appear [illegible]ome kind of American manufactures, however [illegible]ll, as a compliment to the institution—generally [illegible]air of gloves, a waistcoat, a watch chain, and m[illegible] unable to procure any thing else, would cut [illegible]ane from the forest, as being of the *home* ch[illegible]er. Such were those times; in these, could n[illegible] million of Americans mount the *uniform* of ind[illegible]dence?

I just laid down my pe[illegible] peruse a letter from my friend, your friend, a[illegible]is country's friend, Barton, vice president of [illegible]alley Society, and find it so much to the purp[illegible]f my communications, that I will conclude th[illegible]mber by enclosing it to you for publication, with the remarkable specimen of South American wool, which it contains—and am, Very truly, yours,

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* Mass. Agr. Repository and Journal, No. 3, vol. 7.

* Address to the Massachusetts Agricultural Society, at Brighton, Oct. 1822.

G. W. P. CUSTIS.

Arlington House, June 10, 1825.

—

Dear Sir, *Springdale, 6th June,* 1825.

Knowing the interest which you have always felt for the improvement of our native sheep, I enclose you a sample of wool sent from the old province of Leo Pay, in upper Peru. I have not been able to gain any information, whatever, in relation either to the character and habits of the animal producing this wool, or the quantity yielded annually.—The facility with which you can acquire the knowledge desired, from the officers of the navy, will, I have no doubt, induce *you* to seek for it. I think it highly probable, the silken texture of the Peru, mingled with the long wool of Arlington, would produce a very valuable variety. If you join me in this impression, may not you render lasting services by making the experiment, when practicable.

Believe me, truly yours,

WM. M. BARTON.

G. W. P. Custis, Esq.

REMARKS ON LORAIN'S HUSBANDRY.

Dear Sir, *Springdale, May* 15, 1825.

I was not apprized of the publication by Carey & Lea, of Mr. Lorain's agricultural work, entitled "Nature and Reason harmonized in the Practice of Husbandry," until I saw a republication of the 13th chapter in the American Farmer. I am much pleased to find Mr. Lorain has taken up the subject of deep ploughing, and green dressing, and particularly so, when I find his opinions so fully accord with my own, in relation to that matter.

The several years experience I have had in the application of green crops, teaches me that with judicious management, they afford the farmer the best means of renovating exhausted land—and with the barn-yard manure that can be made on every farm, used as an auxiliary to a green growth, the most impoverished and ungenerous soil, can be made in an astonishingly short period, a liberal and productive one. Those opposed to every thing like innovation, in a system supported by thepractice of fifty years, tell you of unsuccessful experiments they have made; or meet you with the fact, that Gen. Washington, who, it is well known, was zealous, enterprizing, and persevering as a farmer, sowed upon his Mount Vernon tract, eighty or a hundred acres of buckwheat, which was turned under, and proved totally unavailing and abortive. It is true, if I am not misinformed, that Gen. Washington did plough under a considerable growth of buckwheat, without any visible effect whatever.—Similar experiments have been made by many others (by myself for one,) with similar results.—But granting this, it by no means furnishes an argument that can be with propriety wielded against the opinion promulgated by Mr. Lorain, and corroborated by my own reasoning and experience. It may as reasonably be offered as a support to an assertion made by Mr. Lorain in another part of the same chapter, to which I fully respond, "that a thin soil should not be ploughed deep when the vegetation is turned under it, preparatory to a wheat crop." When a crop, however prodigious it may be, is turned under such a depth, either fermentation is destroyed, or so much poor soil is placed above the fermenting matter, into which its fertilizing properties have to extend, that a good effect ought not to be expected the first experiment—one or two repetitions are necessary to make it visible. Into this error I have but little doubt Gen. Washington fell. An advocate for deep ploughing, and sanguine in his expectations of the result, he placed too great a quantity of poor said over, perhaps, what was a stinted growth of buckwheat. Disappointed, his characteristic perseverance forsook him, and the experiment was not followed up, as it should have been, by two or three applications, or by one with shallow ploughing.

When I first commenced this system, it was in a field upon which there was an immense growth—it was literally covered, and my plough horses fed from the tops of the oats without stooping. The ploughs entered almost to the beams, and the mass, with the end of the chain, was completely concealed beneath the new surface. Of the many who saw this operation going on, there were few who did not protest—some said it was giving a certainty for an uncertainty—some, a crop in existence for one anticipated—others, that a bird in the hand was worth two in the bush, &c. All, however, who saw it, in common with myself, watched the effect with some solicitude. Our very open winter which followed, set in early, and I soon had it in my power to anticipate the result—I saw the error I had committed in *ploughing too deep*, "thereby turning up too much poor soil;" and in *too much cultivation*, "thereby checking fermentation." My crop was such a one as the fields had averaged for the last twenty years, about fifteen bushels per acre. Convinced that the error was in myself, and that if nature had not been checked the result would have been different, I continued the experiment, and could now show you a field of forty acres, upon which it was made last year, of most beautiful wheat; I will venture to say it will yield several hundred bushels more than usual. I have made experiments with buckwheat, millet, oats, and corn—sowed three bushels to the acre. I have no hesitation in preferring the oats to any other grain, for the purpose of green dressing.

How few farms there are, sir, that have not upon them some fertile land, some low marshy place, or some rich pocosin, (as described by Mr. Custis, in the 7th vol. of the Farmer,) that would produce an immense growth of oats. If the oats were sown upon these spots early in June—cut when in head—hauled to the poor land, and immediately ploughed under, what astonishing changes could, in a few years, be exhibited in our tide-water country, and at how much less expense than that incurred by removing and settling the forests of the west. The total expense of manuring the forty acres spoken of, was only two shillings per acre, or thirteen dollars and thirty-three cents.

Mr. Lorain was opposed to the deep cultivation of maize, but I presume was, as most of our practical farmers are, favourable to the deep breaking up of corn land. The system, which has gained ground, and is pursued by most of our experienced northern farmers, is to break up deep, and cultivate shallow, thus avoiding and leaving uninjured all the deeper roots of the corn, and exposing the soil less to a drying sun. The shallow cultivation is followed by many of them, with what may be termed the levelling one—that is, reducing the ground to one common surface, with cultivators, or small harrows, after each ploughing.

As my principal object in writing, was to point out, if in my power, the advisability of farmers of poor lands, adopting the fertilizing system recommended by Mr. Lorain; and as I am at the close of my sheet, I must desire you to believe me,

Respectfully, yours,

J. S. Skinner, Esq. WM. M. BARTON.

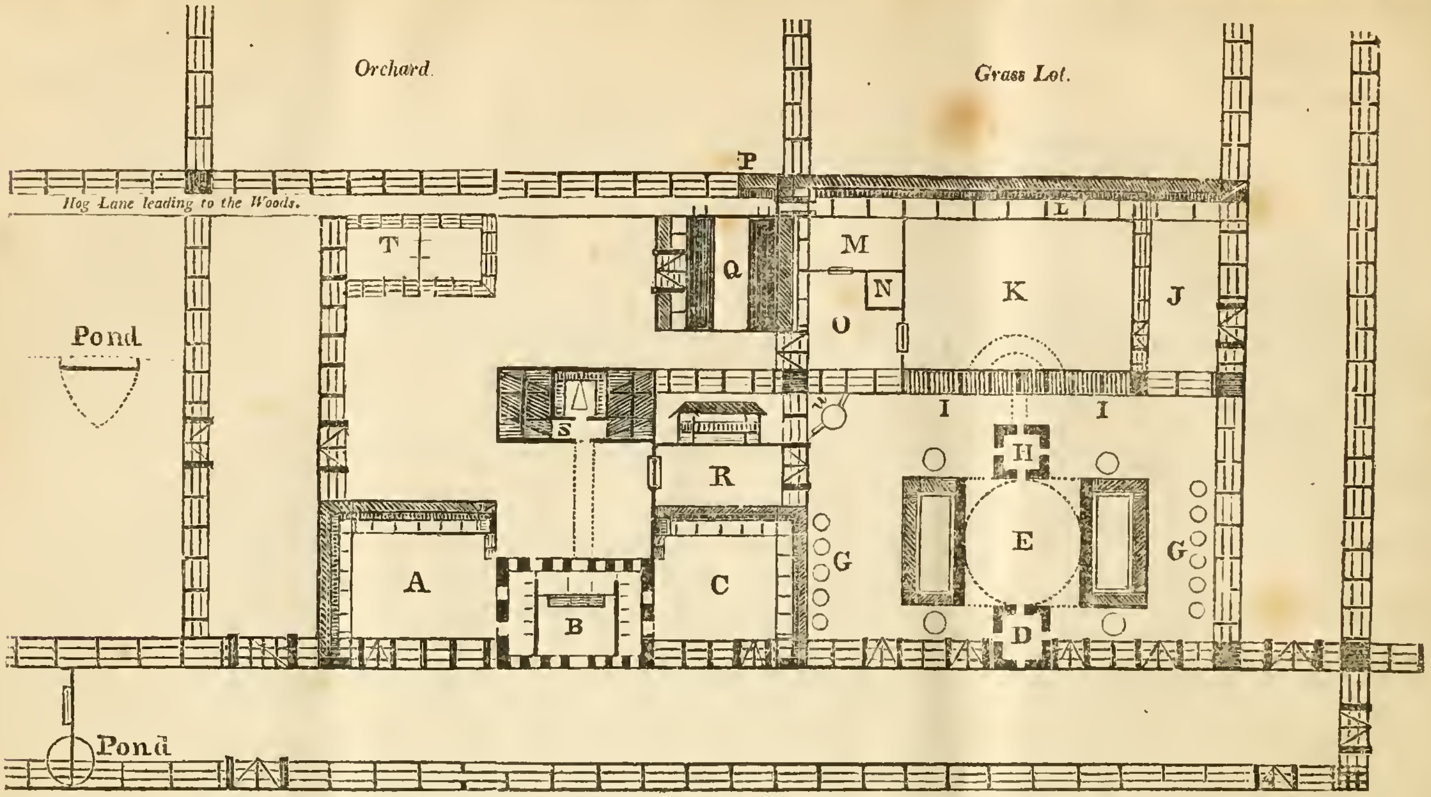
——— *Farm, near Philadelphia.*

To the Editor,

It is an important fact to dairy farmers, tested by several in this vicinity, that cows turned into a pasture in the morning, in which there is considerable garlic, and removed before noon for the remainder of the day, into a pasture that is free from it, or foddered where such pasture is not to be had, their milk, and of course the butter made from it, will be free from the taste of that (to most,) unpalatable herb. Without being able, or attempting to account for the fact, I submit it for general information, through the Farmer, and would be gratified in having a reason assigned for the circumstance. M.

MEADE'S BARN YARD.

A FARM YARD is so intimately connected with the farm itself, and so essential to its prosperity, concentring all its product, whether animal or vegetable, as to make it of the utmost importance to have it situated and constructed with relation to such connection, as well as to its size, divisions, and other economy, so that it may be the capacious, comfortable, secure, and convenient receptacle of every animal and all the provender of the farm. Uniformity should always be preserved when not at the expense of convenience; so in our leisure hours we may delight in the survey of our labours. The expediency of bringing together all the produce of a farm, and securing it in such manner as to facilitate the labour of a considerable portion of the year, must be obvious to every practical farmer, and will also bear the test of plain reason. The farm yard should be considered as a most valuable part of the husbandman's capital, and will bear an interest just in proportion to its adaptation to the general purposes of the farm. A great saving of labour, if we were to descend to particulars, might be demonstrated in the proper use of a judicious farm yard; for it may without doubt be asserted, that in the course of the year, not one hour need be lost where there is sufficient shelter to labour under. This establishment contains about 1½ acres of ground, and is sufficiently large for farms of from 3 to 600 acres of open land; less ground, of course, would answer for the smaller farm: but the great advantage of having an abundance of room for stock, and for the convenience of wagons and carts going to and from, is far above the loss of a small bit of ground. This acre and one-half is an oblong; when divided, forms two squares; the first for the stable, cow shed, corn shed, horse pen, hog pen, and corn house, on which the former are all dependent, save the corn shed, which is the supplier; these divisions being brought as near as possible to the corn house renders the feeding at all times convenient, but especially in bad weather; and the circumstance of taking a view of the whole from one or two points is very gratifying. The second square brings into connection the hay, corn fodder, straw, &c. of the barn yard, with the horses, cattle, and sheep, of their respective departments, which receive their supply of water by passing through the vacant ground of the corn house yard through gates to the pond; but this trouble should be avoided by obtaining, if possible, a supply of water in the yard, for the saving of manure, &c. There is a thorough internal communication for carts and wagons from one division to the other, preventing the necessity of going beyond its bounds into the mud, or travelling, perhaps, around one, two, or three sides to get into another pen. If it be objected there are too many gates, it must be observed, that much convenience cannot be had without additional expense; a gate or two in the middle of a farm yard prevents the necessity of travelling around it; and the addition of two or three more facilitates the passage of stock to water, or to their different pastures, without mingling with each other. The whole is surrounded by a lane which has the double effect of confining within a small compass, all the stock, or serving as an outlet to the pasture of different lots and fields. The farmer, too, in passing around the yard on horseback, has a view of any business going on, stock feeding, &c., across the yard, in front, or through the course of the gates, lengthwise, which is a great convenience when time does not permit a more intimate examination.



REFERENCES.

A. Shelter, on locust posts, and stone wall from 5 to 6 feet high, 10 feet wide, with a shingle roof, 60 feet square. One-half the shelter is sufficient for 12 milch cows, to which it is appropriated; the other half secures their provisions, which of the rough kind, is scattered over the yard to make them dry and comfortable in any part of it; of the better sort, such as hay, soft corn, bran, &c., is put in racks or troughs touching the walls.

B. Stable, 40 by 50 feet, of stone work, having 15 stalls, and a cutting room in the middle, holding 12 or 15 loads of hay in the loft which has a lath floor, in order to give the new hay as much air as possible.

C. Corresponding to the cow house shelter A., the half of which is used for putting away corn in the shuck, to be handled in bad weather; the other half holds the shucks, which are principally used after the chief manure hauling in the spring, the corn stalks having been exhausted with the major part of the straw. At other seasons these shelters are useful in stowing little crops under, and affording ample room to make stakes and caps, and do a variety of jobs well known to farmers.

D. Frame building, covering a horsemill and wheat machine, which are now out of use; but the house is well situated for a variety of useful purposes, as an appendage to the large barrack it adjoins. From the experience I have had of this machinery, a word may be said to the advantage of farmers who are apt to adopt novelties on report. I have worked a wheat machine of 4 horse power for eight or nine years, and by diligent attention, have succeeded in working it to advantage; a horsemill in like manner, for three or four years, which was a great convenience and saving; but the attention necessary to keep the machinery in good order and make it profitable, is greater than any farmer can bestow who is not willing to devote all his time to absolute drudgery; to such as unite ingenuity with uncommon industry, well erected machinery may be advantageous; but a farm on a moderate scale, say from 2 to 3 or 400 acres of open land, having 4 or 8 hands, and not requiring the aid of an overseer, cannot often be benefited by such machines. It is only when land enough is cultivated to produce generally 2 or 3000 bushels of wheat, and requiring the aid of a manager, who may be capable of attending to it, that a wheat machine would be advisable; well attended, they not only have the advantage over treading, as to the quantity gotten out, but save, I believe, at least 5 or 6 per cent. Money is thrown away on a machine having less than four horse power. It is a subject worthy the attention of farmers to examine into, for it must be recollected that if a machine is not properly managed, an immense loss is sustained, much more than in careless treading, which may be fairly estimated at 10 per cent.

E. A treading floor, 44 feet square, in the centre of a barrack 44 by 90, with high shed set on locust posts, the body plain frame work of sufficient dimensions to hold 1500 bushels wheat in the straw; the pitch of the shed admit of loaded wagons passing in and through the treading yard; the height of the shed surrounding the frame work, renders the act of unloading easy and rapid, either at the end or side. The cost of this building was but 600 dollars, which answers for wheat, rye, &c., with the aid of a small granary, as useful a purpose as a much more costly building.

G. G. Rows of hay stacks, convenient to horses and sheep, and leaving abundant room for a team to manœuvre between them and the barrack.

H. Granary, 26 feet square, with 4 doors; the convenience of which is manifest in taking advantage of the wind in running wheat through the fan.

I. I. Shelter for straw and stalks, dividing the cow yard from the barn yard, 10 feet wide, 12 feet, high, covered with straw. When the straw from the treading yard is put under this shelter, the cattle are also fed, as there are very high straight racks on the side of the shelter next the cattle to support the straw in a body, and feed the stock. A circular shelter for straw, where the ground suits, would have additional advantages, and the shelter to the right and left, be used for stowing away corn stalks; the saving of labour in this particular, I find to be very great.

J. Sheep yard, with a shelter, communicating with lots for ewes and lambs.

K. Yard for the main stock of cattle, which should always be very roomy, since there is a greater mixture of small and great, weak and strong, than in any other pen. If the ground is not formed by nature for a convenient pen, it should be raised on the rack, and shelter sides declining to the centre, to keep the stock high and dry; the manure will naturally incline to the middle, where the bulk of which will be most easily taken from; the corn stalks which are always first fed will soon prevent the cattle from feeling any inconvenience in crossing the middle of the pen in very wet seasons.

L. A shelter, on locust posts, 6 feet high and 8 feet wide, weatherboarded on the outside, and covered with straw; but it should be a good thatch.

M. Part of the same yard and shelter, divided off for young cattle to be kept from the bull until three years old.

N. A square covered rack giving feed to three pens.

O. Pen and shelter, an outside situation, as work oxen are frequently called for. A much greater abundance of corn stalk fodder is given to the work oxen; having less time to feed than the other cattle, they get the best of it in a shorter time, and the other cattle are permitted to occupy their pen when they are at work.

P. Hog shelter, which communicates with the cattle pens by a slip-door through the weatherboarding. Hogs derive a considerable supply of food from the droppings of the cattle, and the straw scattered about, and will not get the mange if they are stopped out every night. It is only advantageous to permit hogs the liberty of the cattle yard, when the food of the latter is completely secured from the dirty intrusion of the former.

Q. Pen for stall feeding beeves and fattening hogs; it admits of a division in the middle. This pen is about 60 feet square, but is not yet completed for the purposes intended; it is to be paved with flat limestone 20 feet out from two of its sides, leaving 20 feet in the middle, unpaved, for the manure to be collected; the pavement will have a declivity to the centre; there will be good shelters to the north west, and a security for several loads of leaves to be put up dry in the fall, as a supply of warm and wholesome bedding will be given every week or two, during the winter, when the old beds will be thrown into the manure sink. Fattening cattle may to advantage be fed lavishly with corn when hogs follow them.

R. I am so well pleased with this newly adopted mode of keeping my horses, that, had I not already a stable, I would never build one. It is true, the circumstance of having a great quantity of hay above the horses' heads, under the same shelter, is a great convenience; but, on the other hand, the inconvenience of cleaning after a dozen horses, or suffering the manure to accumulate, carrying it out at stated periods, is to me more than a balance, for I can haul four loads out of an open pen sooner than one from the stable. A covered rack or racks is situated as near the centre of a pen 60 or 70 feet square as may suit the inclination of the ground, large enough to hold from one to two loads of hay, fodder, or straw; 10 feet by 20 is a good size, from 10 to 12 feet high in the body, with a secure cover over locust posts or stone pillars; the racks are placed within the posts, and form a manger between the bottom of them, two or three feet from the ground, and the enclosure of the same height, which surrounds the posts, so that no hay, &c. can be lost by a constant pulling from the rack that is at all palatable. A division may be made in the pen to separate the work horses from others, a dry shelter to the north west. This winter, two years, with cornstalk fodder, straw, &c. I hauled out from the pen 65 ox cart loads of manure made by about 12 horses. It is remarkable that they make much finer manure out of the cornstalk than do the cattle; and it is owing to the circumstance of their playing around the rack, throwing and scattering the stalks about which are unbroken, and trampling them to pieces.

S. Corn house, with rooms in front to beat out, and put away shelled corn; and double sheds, for carriage, wagon, and farming utensils to be stowed under; the corn room is lathed entirely up; but since I have been in the habit of cutting up the corn, there has been a necessity for a division in the middle to permit the air to go through; otherwise, in a bulk of 250 barrels, much would be injured.

T. A small pen with a division, for the convenience of driving animals into, on various occasions, and for different purposes.

U. A well; to be without which, no farm yard can be complete; which should be situated to water the different pens with small troughs, supplying the larger ones. Some few may take advantage of running water. Cisterns are sometimes very convenient; occasionally, ponds may be made so. Driving stock out to water should be avoided, to save trouble and manure.

DEVON BREED OF CATTLE.

Baltimore, 10th June, 1825.

Mr. Skinner,

I hear that Mr. John Barney, of Port Penn, in Delaware, the celebrated grazier, has fixed his attention on the Devon breed of cattle sent by Mr. Coke, of Holkham, to Mr. Patterson and Mr. Caton, and generally called the Coke Devons. A breeder of such experience as Mr. Barney, must have seen great excellence in them, to have been induced to turn his attention to this stock, when so many others have been placed before the public eye, and so highly extolled. Whatever may have influenced his choice, the public will benefit by his labours; for without any disparagement to the gentlemen who hold the original importations, a skilful grazier, such as Mr. Barney, will bring their merits forward with every advantage to the breed.

The price he paid for the full blooded cows is, I understand, $200 a piece—and for a bull calf $100; and for degrees of blood less than full, in proportion.

A GRAZIER.

AGRICULTURAL PROSPECTS.

Sir, *Raleigh, N. C., June 7, 1825.*

You will bear in mind that my predictions last fall have been more than realized. I stated then that the crops of cotton had the rot, and if the disease was general throughout the southern country, so as to be a short crop, the price which we should receive for the short crop, would be more than could be obtained for a full crop. From the very large quantity, over what was ever planted before, of cotton, in this state, Virginia, and elsewhere, the crop of the present year must be immense. We have now to pray for a partial destruction of the plant, by rot or other disease, provided the injury can be general throughout the cotton growing country. I have travelled a good deal for the last five weeks, in this state, and I find that there are two acres in cotton for one of corn. This may not be the case off the roads, but at all events a great scarcity of bread stuffs will be certain. The crops of wheat in this state, are affected with the bug partially, and in some neighbourhoods entirely with the rust. The crop of tobacco, from James River in Virginia to Cape Fear in this state, must certainly be a smaller one than has been aimed at for these forty years. As the planters of this article have been but poorly rewarded of late years, I think there is every prospect of their obtaining a good price for the present year's crop.

Yours, respectfully,

WM. BOYLAN.

RURAL ECONOMY.

ON BORING FOR WATER.

Washington, Jan. 31st, 1825.

J. S. Skinner,

Sir: I send you John Trimble's essay on boring for salt or fresh water. Mr. Dutty, of Wheeling, (Virginia,) has bored about 900 feet for salt water, on the bank of the Ohio river. He works his auger with horse power, which very much reduces the expense of boring. I am, &c.

DAVID TRIMBLE.

To the Editors of the National Intelligencer.

Gentlemen,

You have been twice called upon lately, by "A Farmer," for information on the subject of boring for fresh and salt water. He refers to a paragraph in an English paper, in which the art of boring is claimed as a recent discovery made in England: but the fact is, that we *savages* of the west have had it in use for more than twenty years before it was exported to that kingdom. We all know that *John Bull* has a habit of claiming all useful inventions as his own, and, therefore, I was not surprised when I saw the attempt thus made to impose the discovery upon the world as of British origin—but I am astonished that any American should have been inclined to believe, (as your querist is,) that the account of boring is a *hoax*. The art (I repeat it,) has been practiced on the western waters for more than twenty years; and, I presume, that not less than two hundred experiments have been made, terminating at various depths, of from fifty to five hundred feet. I assure you and your readers, that I was, myself, jointly with others, interested in an experiment for salt water, in which the boring terminated at about three hundred feet, and was present during the greater part of the operation. The original inventor is unknown to me, but his discovery has saved the western people some millions of dollars, by reducing the price of salt: and, as the subject is of much importance to those who are not so fortunate as to have pure fresh water springs near their dwellings, I shall give a hasty reply to your inquiry, hoping, however, that some one better qualified will supersede me, by giving you a full statement of the whole process.

In boring for fresh water, the expense and trouble of sinking a *gum* would be a mere trifle, as solid rock would generally be found near the surface; but experiments for salt water are usually made along the banks of large streams at low water mark; and, at such places, it is indispensably necessary to sink a gum through the sand and gravel to the rock, so as to exclude the fresh water, which would otherwise defeat the operation. I shall, therefore, begin by describing the manner in which gums are prepared and sunk, and shall then describe the auger and mode of boring.

The experiment is commenced with an iron bar, (square or round,) about thirty feet long, and nearly two inches in diameter; the point should be of steel, well hardened, and at the end a strong loop must be made for the handle. With this bar (which is called the *searcher*, or *searching auger*,) the sand or soil is perforated until the point strikes the rock: it is then drawn up and measured, which gives the length of the gum that must be sunk.

The gum is prepared in the following manner: Find a poplar or sycamore (the latter is best.) of the length required; it must be 4 feet in diameter at the small end; saw both ends square, and bore a hole through the centre of 2 or 3 inches in diameter. *Reem* a funnel at one end, in which, if a fire is properly built, and the opposite end a little elevated, the blaze will be drawn along the hole, and enlarge it from end to end. The fire may be fed by putting in small poles or split wood, and the log must be rolled over from time to time, to equalize the action of the blaze, until a calibre is formed of not less than 3 feet—3½ feet is better. If it burns too fast at the ends, slack the fire with water.

The *gum* (such is the name it now takes,) is carefully hauled to the place where the experiment is intended to be made: a strong iron hoop should be driven on the small end to prevent it from cracking when the head is wedged. A few feet may be dug in the ground at the place perforated with the *scarcher*, and the small end of the gum is laid over it. A strong frame, with four perpendicular posts firmly braced and well fastened in ground or mud sills, is then planted at the hole, and the gum is elevated until it is brought to an exact perpendicular; in which position it must be kept while sinking, and great care is required at the commencement to prevent it from working obliquely. A strong platform must be placed on the top of the gum, with projecting beams covered with plank, leaving a square of about three feet over the centre, through which the interior operation is conducted.

A *sand auger* with *bags*, is then used, to cut and draw up the sand and gravel, which must be thrown on the platform, the weight of which is usually sufficient to force the gum down.

I shall refer your readers to the Patent Office at Washington, where they may find a description of the *stone chisel* and *sand auger with bags.* The patents were granted to Mr. Richard Deering, of Greenup county, Kentucky, and his description and directions how to use them will be better understood than mine. The process is continued with the sand auger until the gum sinks to the rock.

A tube, or conductor, is then made, by getting a log as long as the gum, and about 9 or 12 inches in diameter, through which a hole must be bored of not less than six inches in calibre; and thus prepared, it must be put in the gum and plummed to its centre. And an auger is then made, similar to those used in blowing rocks, with a square shank, less than two inches in diameter, and about twelve inches long. On the end, a screw is cut, which is firmly screwed into a socket formed on the end of a similar bar, which should be about twelve feet in length; on the upper end of this bar, which is called "*the dickey*," a similar screw is cut, which is, in like manner, screwed into a similar socket, made with concave clamps, which is firmly rivetted to a round pole, made of ash timber, twelve feet in length and about two inches in diameter. This is called the second joint of the auger, the iron bar being the first. On the upper end of this pole, or second joint, a similar clamp is fastened, with a screw upon it, which is screwed into a socket fastened with clamps on another pole. This pole, or joint, may be 15 or 20 feet long, and thus the joints of the auger may be extended to any length required. A short joint must be made, of iron, with a swivel at the top and socket at the bottom, which is screwed to one of the joints, and a rope, of twelve or more feet in length is fastened to the swivel.

A *spring-pole* is then procured, of twenty or more feet in length, (pine is much the best,) the large end of which is fastened to a post, firmly planted in the ground: a platform is made on the frame first described, about 12 or 15 feet above the top of the gum, and a folcrum is fastened to the frame about 3 feet above the platform: the spring-pole is placed on it at an elevation of eight or ten degrees: and the point of the pole should project over the gum.

The auger is then let down the six inch tube or conductor, and suspended to the spring pole by the rope, the pole being sprung down a few inches, and the rope made fast. Two men stand on the platform, facing each other, on adverse sides of the pole to spring it, and an operater stands on the top of the gum, (which should now be covered,) holding the auger gently in hand, and turning it as the pole springs up. He must turn to the right, or the joints will unscrew, and the auger must be carefully plummed to the centre of the tube or conductor, so as to work free and not rub.

The auger first used must have a bit of about six inches, and with this the operator must bore through the soft shelly substance usually found, until he comes to the hard solid rock, into which he will penetrate twelve or eighteen inches. The auger is then taken out, and the conductor also in which it was inserted. Thus far the sinking and boring may be conducted with the gum full of water; but if any has risen, it must now be pumped out, and a head, previously made to fit the bottom of the gum, must be put in: this may be in two or more pieces six inches thick, and in its centre a round hole must be cut, of rather more than six inches in diameter; a tube must be prepared long enough to touch the rock at the bottom of the six inch hole, bored as before described, and to rise six inches above the interior head of the gum: this tube must be nearly six inches in size, with a hole 3½ inches, bored through its centre, It must be carefully wrapped with hemp, from one end to the other, until it fits the hole in the rock tight enough to require driving: it must then be put in the hole and driven home, and the joints and edges of the head must be wedged and corked until all fresh water is excluded. This must be carefully done, so as to make the head water-proof, and leave all fast and firm; and as this is the most difficult part of the whole experiment, I would advise the undertaker to have the work well done and effectually secured. If the water is troublesome, two or more pumps may be used to keep it down.

A three inch bit (if the hole is intended to be of that size.) is now screwed on the bar, and the long tube or conductor is again let down and placed exactly on the top of the short tube, and the auger is put in and suspended to the spring-pole, which must be gently sprung, until the auger is well plummed, and works free without rubbing. The conductor must be well braced, so as to keep it firmly to its perpendicular position; and the top head being laid on the gum, all is ready for boring.

The operator may now turn the auger, and (as the phrase is,) begin to bore for salt water, and may bore, as many have done, for five hundred feet in search of it. If the pole is properly sprung, the *fall* of the auger will be sufficient to perforate the rock; but if hard places are found, the operator may give some additional force to the fall, and those who are perfect in the art of boring, can do so without much increase of muscular exertion.—After working a few hours, the pole men will find the spring of the pole, and will then know how to make it *work free and easy*, by changing its elevation, and by moving the fulcrum, if necessary.

If the auger is permitted to work obliquely at first, the experiment will be lost—and therefore it must be well handled at the beginning, and the hole bored for the first fifteen or twenty feet, upon an exact perpendicular. Care should be taken to prevent any substance from falling into the hole, especially iron or steel. In the experiment which I in part superintended, our operator wrought the auger nearly two weeks upon a single inch, and we were never able to know whether his efforts were resisted by the hardness of the rock, or the hardness of some substance which had fallen into the hole.

It is usual in salt water experiments to bore a hole about three inches in diameter, and of course the bit of the auger must be of that size, but two and a half inches is common, and will do nearly as well. The bit must be made by a guage, and must be guaged whenever sharpened. The operator must have four or five of them, and in boring, must be changed every three or four hours; because the friction will reduce the size of the bit. When a fresh bit is put on, the operator must work gently until he reems the hole down to the bottom.

In making the joints of the auger as before described, the head of the socket must be swelled to about two inches, and a similar head or shoulder must be made on the screw; and these should fit close when the joints are screwed on. The bar must be square, from the head or shoulder to the clamps, and two screw drivers are required, the book of which must fit the square of the joints. In drawing or returning the auger, one of them is hooked upon the lower joint and held fast, and the socket of the upper joint is screwed off and on with the other.

The auger should always be drawn at night; because if any hard substance should get in, by accident or design, it would perhaps be impossible to draw it up. When drawn, the joints should be placed in a perpendicular position, to prevent them from springing.

A *sand pump* must be used every two or three feet, to draw out the borings. It is made by getting a copper tube three or four feet in length, and two inches in diameter, in the lower end of which a *valve* is fixed, and at the upper end a screw is made to fit the sockets of the auger joints. A hole is cut in the side of the tube two or three inches below the screw, and it may then be screwed on and let down, and being filled by ten or fifteen gentle strokes, is drawn up and emptied. This may be done quicker and easier by tying a long rope to the top of the pump, a hole being made for that purpose. If the rope breaks, the auger must be let down with a hook screwed on to fish it up.

In making experiments, it almost always happens that one or more streams of fresh water is struck before salt water is obtained, and, in such cases, the fresh water must be tubed out after the boring is finished. For this purpose, a tube is made of copper, (with joints similar to those of the auger,) the calibre of which should not be less than one and a half inches—two would be better. When a stream is struck in boring, the auger is marked and the distance measured, and the tube must be long enough to descend below the lowest stream that is proposed to be excluded. Before the tubing commences, the hole must be *well reemed* to the proper distance; which being done, the lower end of the tube is carefully wrapped with soft hemp, for two or three feet, and is then let down, or rather pressed down, until it passes a few feet below the stream of fresh water.

The upper end is wrapped in the same way, so as to fit the wooden tube at the bottom of the gum, and the plate of copper should be fastened on it and nailed to the wooden tube. If this is properly done, the hemp will swell enough to make it water-tight at both ends, and, if well rubbed with tallow, will last for many years. The upper end of the tube should be plugged while the workmen are fitting it in, and, when all is ready, the plug is drawn, and the salt water rises.

In this description I have endeavoured to give a part of the information which you want. Some non-essentials have been omitted for the sake of brevity, but any workman of common capacity will supply them, when required, in the course of an experiment. You will find some tautologies in reading, for which I offer an apology by saying that I wanted to be clearly understood, and that I have written hastily and have no time to review and prune.

The art of boring is now so well understood, that persons of skill can be hired to bore any depth, at the following prices, and probably for less: For the first 200 feet, 2 dollars per foot; for the next 100 feet, 3 dollars per foot; for the next 100 feet, 5 dollars per foot; and for the next 100 feet, 6 50 or 7 dollars per foot. At these prices the undertaker boards and pays his own hands, and the owner of the soil furnishes the auger. And thus a hole may be bored 500 feet deep for less than two thousand dollars, and I make no doubt has been often done for twelve or thirteen hundred dollars by persons using proper economy.

It is said that some person, whose name I have not heard, has obtained, or is about to obtain, a patent for a mode of boring by horse power. This, I am sure, may be easily done; and I have been told by an acquaintance, that he once saw an auger at work by water power, with only one hand to manage it when in operation.

I have no time at present to say any thing upon the question of subterranean hydraulics; and, if I had, you and the "Farmer" can get much better information by consulting books and men of science. I am satisfied that the same laws govern the gravitation of water below and above the earth, and that the jet of a stream is not and cannot be higher than its source.

The lower point of a cavern half filled with water may be struck in boring, and if the superincumbent air is comprest, its expansion will force the water upwards until an equation of force is produced between the powers of gravity and rarefaction. The jet of such a fountain may be much higher than the source of its feeders, but when the air blows out, the water must subside. The whole effect being produced by a well known law of the science of pneumatics.

No actual experiment, within my knowledge, justifies a belief that flowing water can be procured on a hill by boring, unless there is a neighboring hill, higher, from whence the stream is fed; and yet I believe that the discovery is a much more important one than the "Farmer" is aware of. Good water, even if obtained by boring an hundred feet below the surface of a valley, is better than a bad spring on the top of a mountain. I am satisfied that thousands of valuable lives are annually lost to the country by drinking bad water in the sickly seasons, who might be saved, and the sickness of other thousands prevented, by expending a few hundred dollars in making experiments. Living streams of pure fresh water, cool and healthy, are found every where below the surface.

The inhabitants of low, flat countries, whose springs are only swamp water, filtered through mud and sand, would be certain of getting pure streams, by sinking gums and boring; and the experiments would often end by sinking the gums—as it is known that good water is often procured in the gravel, thirty or forty feet below the surface. The quantity is sometimes so great that it is difficult to head a gum at the bottom. It is known that pure fresh water is often found below streams of salt water, and I am satisfied that people living on the seaboard may find fresh water two or three hundred feet, or more, below the surface of the sea: and, when found, the salt water may be tubed out, and the fresh water obtained—as it will always rise in the tube and gum, to the level of the salt water surface; and, if fed from neighboring heights, will rise to the level of its source. I am told that, in some of the islands, the entire population of towns are supplied by importations of fresh water, which is preserved in tanks and cisterns, and made fit for use by filtrations.

These good people might supply their wants from native fountains and subterranean streams, by boring. Two thirds of the inhabitants of our cities might bore with success on their lots, and supply their kitchens with pure water, instead of the filthy drainings taken from their reservoirs.

It has been said that there is no good water on Thompson's Island, (Key West,) and I shall believe it, after an experiment is made, by boring four or five hundred feet, and not before. I will admit, however, that such small flat bodies of land, surrounded by the sea, are not likely to afford fresh water, at any convenient depth; but I should not despair of getting fresh water upon all islands having hills and mountains.

Taking the earth to be a solid mass, (as I believe it is) according to the old theories, I am of opinion that the chances of getting fresh water every where, by boring, is about nineteen to one in favour of the experiment; and if there is an *interior concave*, as Captain Symmes supposes, and he has offered more than sixty good reasons for his belief, I should consider the chances to be the same.

If what is here said will enable you to answer the laudable inquiries of the "Farmer," you are at liberty to publish it; and I am, very respectfully,

JOHN TRIMBLE.

Mount Stirling Ky. Nov. 6, 1823.

MISCELLANEOUS.

ITEMS,

Selected from late English papers received at the office of the American Farmer.

SPECIMENS OF A PATENT POCKET DICTIONARY.

Ostentation—The real motive of many who wear the disguise of hospitality, and invite their guests, "to choke them with envy, not fill them with meat."

Partridge—A bird to which the squirearchy are so strangely attached, that they will shoot, trap and transport their fellow creatures, for the pleasure of destroying it themselves.

Pavement—An old offender, now in the very act of being taken up and knocked on the head by Mr. M'Adam, who may truly say with Macbeth, "the very stones prate of my whereabout."

Peace—A cessation of those wholesale murders which prevaid during three quarters of every century in this enlightened era, and which are sanctioned and inculcated by all Christian governments under the name of war.

Ring—A circular link put through the snouts of swine and upon the fingers of women, to hold them both in subjection.

Royalty—Solitary imprisonment in a crowded court—selling yourself for a crown, and subjecting yourself to slavery, in order that you may enslave your subjects.

Tinder—A thin rag; such, for instance, as the dresses of modern females, intended to catch the sparks, raise a flame, and light up a match.

Usury, Law of—Punishing a man for making as much as he can of his money, although he is freely allowed to make as much money as he can.

Watering Places—Sundry barren, shingly, chalky spots upon the coast, disfigured with a frail lath and plaister bow-windowed tenements, which being supplied with scanty white dimity curtains, a few rickety chairs and tables, and some knotty featherless feather beds, are considered to be furnished. Hither thousands resort during the six weeks of an English summer, to ride in an improved species of wheelbarrow, drawn by jaded donkies or ponies, to sit on the pebbles, and pelt them into the sea, to catch cold by walking on wet sand, to lose money in raffles, and enjoy at least one pleasant morning—that on which they return to London.

Wedding—A tragi-comic meeting, compounded of favours, footmen, faintings, farewells, prayers, parsons, plum-cake, rings, refreshments, bottles, blubberings, God-bless-ye's, and gallopings away in a chaise and four.

Limited Loquacity.—A tradesman, who had a shop in the Old Bailey, opposite the prison, kept two parrots, for the inconvenience of his neighbours—a green disturber, and a gray. The green parrot was taught to speak when there was a knock at the street-door—the gray put in his word whenever a ring came at the bell; but they only knew two short phrases of English apiece, though they pronounced these very distinctly. The house in which these "Thebans" lived had a projecting old fashioned front, so that the first floor could not be seen from the pavement on the same side the way; and one day, when they were left at home by themselves, hanging out of a window, a knock came at the street-door. "Who's there?" said the green parrot, in the exercise of his office. "The man with the leather!" was the reply; to which the bird answered with his farther store of language, which was, "Oh, ho!" Presently, the door not being opened, as he expected, the stranger knocked a second time. "Who's there?" said the green parrot again. "D—n you, who's there?" said the man with the leather, "why don't you come down?" to which the parrot again made the answer, "Oh, ho!" This response so enraged the visitor, that he dropped the knocker, and rang furiously at the house bell: but this proceeding brought up the gray parrot, who called out in a new voice, "go to the gate." "To the gate?" muttered the appellant, who saw no such convenience, and moreover imagined that the servants were bantering him, "what gate?" cried he, getting out into the kennel, that he might have the advantage of seeing his interlocutor.—"New-gate," rejoined the gray parrot, just at the moment when his species was discovered.

The following fact, which has been communicated to us, and for the authenticity of which we can guarantee, tells greatly against a domestic animal which is not sufficiently mistrusted. A female child, six months old, of the hospital of Laon, under the care of the widow V——, at Aisse, (Aisne,) was put to bed quite well, at six on the evening of the 17th last November. The nurse having fastened the door, went out, and did not return till midnight. On opening her chamber door the cat flew out, having been shut in there all that time. She instantly ran to the cradle of the child, and found it nearly all devoured. The flesh of the chin, the lips, the two cheeks, half of the tongue, as well as the left eye, had been torn out and eaten, and there only remained a few slight traces of blood on the cap and handkerchief of the infant. Two days after the little tiger returned, and scratched at the door of the room in search of its prey. We give publicity to this fact, that it may serve as warning to all careless nurses, who, ignorant of the natural ferocity of the cat, are not sufficiently alive to its deceit, and often themselves place them in the cradles of their little charges. [*French paper.*

A piece of ground attached to the residence of Count San Antonio, at Brighton, was lately knocked down for 8,500 *l.* It had a frontage of 80 feet, and altogether one single acre of land. The cost of the ground twenty-five years ago, was 512 *l.*

The state of trade in Nottingham was never so flourishing as at present. The town has had an increase of not less than 10,000 inhabitants within the last year, and the earnings of the operative classes are so considerable, that many women get from 30*s.* to 2*l.* per week. At Leicester, the weavers are earning from 2 to 3*l.* a week.

The flock masters in the vicinity of Colchester, continue to suffer by the depredations of nocturnal visitors; three fine fat sheep have been killed within the last fourteen days.

Last week was slaughtered at Pytchly, Northamptonshire, an extraordinary heifer, 4 years and 8 months old, fed by John Cox, butcher, on grass, hay, turnips, and a little pollard, but no cake. The weight of the carcass was 1,315 lbs., or 164 st. 3 lbs., eight pounds to the stone: the inside fat weighed 19 st. 3 lbs. This heifer was allowed by judges to be a most complete animal.

RECIPES.

METHOD OF MAKING PUTRID WATER SWEET IN A NIGHT'S TIME.

Four large spoonfuls of unslacked lime, put into a puncheon of 90 gallons of putrid water, at sea, will, in one night, make it as clear and sweet as the best spring water just drawn; but, unless the water is afterwards ventilated sufficiently to carbonize the lime, it will be a lime water. Three ounces of pure unslacked lime should saturate 90 gallons of water.

THE USE OF SULPHUR IN DESTROYING INSECTS ON PLANTS, AND ITS BENEFIT TO VEGETATION.

Tie up some flour of sulphur in a piece of muslin or fine linen, and with this the leaves of shoots or young plants should be dusted, or it may be thrown on them by means of a common swansdown puff, or even by a dredging box. Fresh assurances have repeatedly been received of the powerful influence of sulphur against the whole tribe of insects and worms which infest and prey on vegetables. Sulphur has also been found to promote the health of plants on which it was sprinkled, and that peach trees, in particular, were remarkably improved by it, and seemed to absorb it. It has likewise been observed, that the verdure and other healthful appearances were perceptibly increased, for the quantity of new shoots and leaves formed subsequently to the operation, and having no sulphur on their surfaces, served as a kind of comparative index, and pointed out distinctly the accumulation of health.

BEST METHOD OF CLEANING FINE BLOCK TIN DISH COVERS, PATENT PEWTER, &c.

Where the polish is gone off, let the articles be first rubbed over the outside with a little sweet oil on a piece of soft linen cloth, then clean it off with dry pure whitening, quite free from sand, on linen cloths, which will make them look as well as when new. The insides should be rubbed with rags moistened in wet whitening, but without a drop of oil. Always wiping these articles dry, when brought from table, and keeping them free from steam or other damp, greatly diminishes the trouble of cleaning them.

TO MAKE A LIQUID FOR STAINING BONE OR WOOD OF DIFFERENT COLOURS.

Take strong white wine vinegar in a glass vessel, and put to it the filings of copper, with some Roman vitriol, roach alum, and verdigris, and leave it thus infused for seven days; then boil it in some vessel; and by putting into it bone, ivory or wood, it will penetrate and give it a green colour. If any other colour is required, as red, blue, or yellow, put Brazil wood, indigo, French berries, or any other such colours, to infuse in the vinegar, with a little roach alum.

ENGRAVING IN RELIEF UPON AN EGG-SHELL.

The shell must be a thick one. Wash it well in fresh water, and dry it carefully with a linen cloth. Melt some tallow or fat, and while very hot, make any figures you please with it upon the shell, either with a pen or pencil. Take the shell then by the two ends, and lay it gently in a tumbler filled with vinegar, or diluted aqua fortis, the acid of which, in about three hours and a half, will have corroded so much of the shell as to leave the parts drawn upon in relief, the vinegar having no influence upon the fat which covered them.

SPORTING OLIO.

From late English papers received at the office of the Farmer.

Pigeon Shooting.—The annual shooting match, between 11 each of the Ashton, Midgham and New Hat clubs, for a subscription of ten sovereigns each, at 11 birds, 21 yards of the gun, brought together most of the best shots in the kingdom, on the Langham inclosure, Bagshot heath, on Tuesday. The stake shot for was 300 sovereigns, and the pigeons were the best bluerocks. It was decided thus:—Ashton killed 86 birds; New Hats killed 84; and Midgham killed 82. Ashton won by superior shooting. Midgham was backed at five to four against either club. Five to two no one named the winner, at much heavy betting.

Trotting Match.—The great match for Major Bouverie's fast trotting mare, good at 17 miles in one hour in saddle, took place on Monday. It was for 500 sovereigns, round the mile circle in Ashtead park, in harness, with feather weight. The mare was matched to beat, carrying any weight, 27 miles in two hours. At this season of the year (January,) it was greater than that performed by the horse Traveller, and previously by Giles's Lightheel, of Leadenhall Market, both of which did 28 miles in two hours, with good time to spare. The start took place at 9 o'clock; the ground was occupied by hundreds of the best judges. Betting was 5 to 4 on time, to the tune of some hundreds. The mare performed her task in gallant style, and had more than 14 minutes to spare upon the match. She did her miles to a few steps, and never once broke into a gallop.

Pedestrianism.—The match between Mr. West, the celebrated pedestrian, and Bartholomew, the Yorkshireman, to the 56 mile stone near Newbury the one, and from the said stone to Hyde Park the other, was completed on Monday. Mr. West started at the mile stone to come to London at 1 o'clock on Monday morning, and Bartholomew started from Hyde Park at the same time, for 100 sovereigns a side. West reached the park gates in 9 hours and 11 minutes, winning the match by 18 minutes.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 17, 1825.

The Trustees of the Maryland Agricultural Society met on Thursday last, at Mr. Jacob Hollingsworth's. This was the first meeting of the board since the cattle show; it was well attended, and every member appeared disposed to enter upon his duties with renewed zeal. After some time spent in the transaction of business, they adjourned to meet at Mr. George Howard's, on Thursday, 14th July next.

A national loss has been sustained by the death of the fine horse Exile, bought in England and imported a few years since, by the late Robert Patterson, Esq. This fine animal was in a way to give us a stock of great value, especially for the road and harness, when crossed on the blooded mare. He was let, on the morning of his death, in high condition, to several mares, and before sunset was a corpse. There are of his getting several superb horses, out of blooded mares—amongst them Mr. Dall's, of Washington county, and Mr. Lewis's, near this city; but there is not in America a single animal of the full Cleveland bay blood, unless the stallion and mare, for which the country is to be indebted to Admiral Coffin, may have arrived. If well selected, they will prove an acquisition of incalculable value.

Tobacco.—For the last week, the inspection has not been as extensive as it was for some time before—whole number inspected in the three state warehouses, 773 hhds. One crop of 9 hogsheads red tobacco, made by Jacob Bassford, of Prince George's county, sold for $9 per hundred round. Six hogsheads Ohio tobacco sold for $18 per hundred round. Every description of tobacco maintains its former prices. 4,500 hhds. were inspected in Baltimore, in the month of May.

Errata.—The premium for cider, at the late cattle show, was awarded to Mr. Harry D. G. Carroll, and not Henry Carroll, as stated in the report of the committee.

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On Improving the Native Breed of New England Cattle, by Col. T. Pickering, No. 2—Essay on Sheep, by G. W. P. Custis, Esq., No. 4—Remarks on Lorain's Husbandry—On Feeding Cows—Meade's Farm Yard, with a cut—Devon Breed of Cattle—Agricultural Prospects—On Boring for Water, by John Trimble—Items from late English papers—Recipes—Pigeon Shooting—Trotting Match—Pedestrianism—Editorial—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	WHOLESALE. to	RETAIL, from	RETAIL, to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	7	9		
COFFEE, W.I. Green, .	—	16½	17	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	30		
Georgia Upland, . . .	—	22	26		
COTTON YARN, No. 10,	—	45			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	11	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	35	38		
FISH, Herrings, Sus. new	bbl.	2 18		2 25	
Shad, trimmed, new,	—	6	6 50	7 00	
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 75			
Fine, ...	—	4 25			
Susquehanna, superfi.	—	4 62½			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	45	47		
Wheat, White, ...	—	95	1 00		
do. Red, ...	—	85	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, ...	—	3	3 25	3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	8	9		dull
LEATHER, Soal, best,	—	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 62		1 75	
Pitch, ...	—	1 50	1 75		
Turpentine, Soft, . .	—	2 62			
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 50	4		
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	28	28½	37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—	28	30		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	10 25			
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P	gal.	2 50	3 25	3 00	4 00
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Claret, ...	doz.	8	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	29	30		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

REPLY TO COL. PICKERING ON NATIVE CATTLE, &c.—No. 2.

Jonathan Roberts, Esq.,
President of the Penn. Agricul. Society:

Dear Sir,—Col. Pickering's objects and mine are the same; we differ in the modes, by which they are to be attained. He desires to improve our "native" stock, without the aid of foreign breeds. He ascribes the larger product of English dairies, to the superiority of English pastures. He admits, that breed essentially affects the properties of the animal—argues that the cattle of Devonshire imported by our ancestors, some ages ago, transmitted to their progeny the characteristics by which they are known; and manifests his belief in the effects of crossing by the instance, which he has given, in Mr. Welles' cow of "*English* breed," although "descended (but) by a cross" from one imported nearly *thirty* years ago. He gives extracts from my communications, and deduces arguments to overthrow impressions, which I did not intend to convey. He remarks, "Mr. Powel controverts an opinion, which has been expressed, that the cattle of Massachusetts are of the Devon breed," and in proof quotes a passage from one of my letters, wherein I had observed—"I would contend, that the FINEST cattle of Massachusetts, are mixed with families, of which Mr. Gore, Mr. Stuart and Mr. Vaughan imported the sires. Lancashire, Leicester and *Hereford* blood can be traced by a practised eye, in many of the BEST working oxen, exhibited at the New England agricultural shows."

He continues—"although satisfied that the blood of those imported cattle of Gore, Stuart and Vaughan was here of very limited extent, I have made inquiry to ascertain the facts."

In the same page *he confirms my assertion that "Hereford blood can be traced,"* by saying—"Now although I suppose the Devon race to be predominant in New England, I doubt not that *some* of other breeds were early introduced by our ancestors—some *Herefords unquestionably, whose descendants are yet distinguished by their white faces;*" and in the next sentence, adds—"white faced cattle of our native stock *are now often to be seen.*"

I have neither thought, nor am I conscious of having at any time written, or said one word, which could controvert the opinion, that the cattle of Massachusetts are generally of the Devon breed. In the very sentence preceding the one which Colonel Pickering has quoted, I had acknowledged, that they had been brought by the colonists, who emigrated from Devonshire. I but asserted that "the FINEST cattle are mixed with families of which Mr. Gore, Mr. Stuart and Mr. Vaughan imported the sires." If more had been so mixed, so many would not be bad. The term finest, necessarily limits the number to few. I cannot be suspected of anxiety to prove, that the cattle of Massachusetts, whereof Col. Pickering asserts, '*few can be found of superior character,*" are not of Devon blood.

The "*facts*" which he has had the goodness to ascertain, prove that Mr. Gore's bull, was as handsome and as large, as any bull "he has since seen;" that he was kept from '94 until '98 by Mr. Gore's manager, who was allowed *all* that was received for his services; that in '98 he was bought by a man in Vermont, although "*unruly*;" that Mr. Stuart's heifer was taken to Germantown, where she produced a male calf; that she was so valuable, as to be sent with her calf, to Boston, for the purposes of breeding; that Mr. Vaughan took his cow into Maine. If Mr. Gore's bull begat in the year '94 only ten bull calves, which in the year '96 begat each ten bull calves, their progeny *might* be more numerous, on a fair calculation, than all the cattle I have seen, or can ever see, in New England. But it has been proved, that Mr. Gore's manager was allowed to use the bull for his own benefit during *four* years.

Col. Pickering has given no facts, nor even his belief, as to the bull's *progeny in Vermont*, one of the states, whence large herds of cattle are derived.

I have seen in Maine, many very fine individuals of the long horned race, exhibiting the strongest points of their breed; not only upon Mr. Vaughan's estates, but even in the wilderness, where I recollect a bull, purchased at high price, and considered so remarkable in his form, that I was led many miles out of my way, to look at him, in the town called Bingham.

Of "Mr. Stuart's breed," Col. Pickering has given one instance, and I have seen many. Some years since, I sent from Northboro' to Maine, a bull from a cow which was shown to me as one of this breed, and as the *best* upon the farm. I would ask of what breeds were Col. Chapin's oxen—the black and white oxen—and the fine brindle and dun cows, which have been seen about Worcester, or noticed at Boston, and Brighton, as worthy of premiums and particular regard?

But to put at rest the deductions to show, that I "controvert the opinion, that the cattle of Massachusetts are generally of the Devon breed," I repeat, that I believe they were derived from the Devon breed, but I think they have been improved for the purposes of the yoke, and for those of the dairy, although it has been shown, that in five instances out of six, reported to the Massachusetts Society, the dairies of *native cattle afforded on an average but 92 pounds of butter a year.*

I continue to adhere to the authorities quoted by Col. Pickering, in order that no question may arise, as to their validity or force. I have reserved, as the most important, and conclusive evidence, the opinions conveyed by Mr. Lowell, the President of the Massachusetts Agricultural Society, whose knowledge and research—whose ability and zeal—whose fairness and precision, are alike manifest, in his practice and in his essays, not merely on paper, but upon the soil. He urges the improvement of "native" cattle, but acknowledging that 20 *or* 30 *years* would be required, to enable us to bring them into successful competition with those of Great Britain, proceeds in his formal report, on the Massachusetts Show of ———— to observe—"the best working cattle of Massachusetts are as much superior to those of Great Britain as the Massachusetts stock *is inferior to theirs in the articles of bulls, cows*, sheep and hogs;" and adds, "no man who ever saw Denton, Mr. Williams' bull—Fill Pail, Mr. Thorndike's, presented by him to the Agricultural Society—Cœlebs, sent to our country by Mr. Coolidge—or Holderness, imported by Mr. Parsons, could entertain a doubt, that they *were superior to any animals*, of the same description, which *we had ever seen.*" *All imported short horn bulls.*

"The simple fact, that farmers, always too cautious of adventuring their money, were ready to send their cows at five dollars, and even ten dollars, to these imported animals, instead of fifty cents for the use of our native bulls, is conclusive."

"But what is still more conclusive, because the facts we have now mentioned *might* have been the effect of fashion, or of speculation, is, that when the *progeny* of these animals appeared at our shows, they attracted every eye, and commanded on an average *four times* the price of our native breeds."

"The effect has been so great as to cause the disappearance of our native breed of *young* animals at our shows, with a few exceptions."

At the first cattle show in Pennsylvania, of twenty premiums for bulls, heifers and cows, eighteen were taken by animals of short horn blood. At the second, all the premiums were taken by animals of short horn blood. At the third, where 150 neat cattle, from different states—New York, Maryland, Kentucky, Delaware, and New England, were shown, of twenty premiums, nineteen were taken by those of short horn blood. At the Maryland cattle show, of the last year, the same superiority was apparent, even when half bred Short Horns were opposed by *thorough bred Devons.* At the last Maryland exhibition, on the 1st of June, the judges were not satisfied with awarding the premiums in proof of their superior excellence, but they give the most unqualified opinion in their favour by saying—

"That they award to Edward Lloyd, of Talbot county, for his bull Champion, the premium of ten dollars, as the best full blood improved short horn bull.

"Champion having heretofore received a discretionary premium, on his first arrival in this country, his owner generously declined entering him for the premium to be awarded to the best bull of any breed, believing, we presume, *with this committee, that to be the best bull of the improved short horn blood*, is to be *the best bull of any breed.*"

It is to be remarked, that the gentlemen who compose the stock committees at the Pennsylvania shows, are intelligent graziers, and farmers, *who live by their vocation.* By the act of incorporation, they must be practical men. Upon the land occupied by four of those, who last year determined the awards, at least 1,000 cattle are maintained; and by one of them, several thousands of "store cattle" are annually sold. On examining the proceedings of the Pennsylvania Agricultural Society, it will be found, that they not only preferred animals of Improved Short Horn blood, but without having access to the record, or having any means of knowing their pedigrees, it has happened, that the gradation of excellence, determined by the premiums of different classes, coincides precisely with the various degrees of affinity to the best short horn blood.

Col. Pickering cites the opinions of a committee on cattle, at the late Worcester show, who give a premium for "a half bred cow by the English bull Denton," belonging to his nephew Stephen Williams, Esq. of Northborough, and says, "I have since learned, that this cow was large, well proportioned, and apparently well formed for giving an abundance of rich beef, but that she was not remarkable as a milker;" and he continues, that he has not "yet met with accounts of any of the most celebrated English breeds, that surpass the best cows of our native breed, for the quantity of *butter* their milk will yield."

Col. Pickering has shewn, that the annual products of Massachusetts' "native" dairies, in five instances out of six, are, when contrasted with middling English dairies, as 92 to 286.

I would ask, of what breed was the cow upon which Denton begat the well proportioned animal which took the premium, and to which he refers?

I do not contend, that a short horned bull can entirely conquer the defects of a bad cow; nor should I assert, that if a cow of what is called the "native" breed were a good milker, unless her properties had been established in her family, during a series of years, that her offspring by an "improved" bull would necessarily inherit, in equal proportions, the excellence of either sire or dam; for, if I have not been misinformed, upon the spot, a heifer from the Danvers cow, shows little of the merit which Mr. Oakes, by singular skill and extraordinary food, had brought into view.

If Col. Pickering had gone upon the farm of his nephew, he might have found an imported *Devon* cow whose carcass was neither well proportioned nor well formed for carrying beef; whose udder, though not much larger than that of a goat, was seldom well filled.

I had neither contended for the exclusion of all breeds, except one, nor have I intended at any time to assert, that all the families of the breed which I prefer for the general purposes of the country, are alike well fitted for the dairy, yoke, and stall.

In one of my letters which Col. Pickering has quoted, I expressly stated, "Since the time of Colling, various breeders of England have made crosses with the same race, to meet their particular purposes. I have had, within a year or two, twelve imported animals, and I can exhibit, I think, in the best blood of Mr. Wetherill's, Mr. Curwen's, and Mr. Champion's folds, some essential points, marked by the peculiar views of the respective breeders."

The Herd Book will show, that some of the best streams of improved short horned blood were, many years since, slightly crossed with the Galloway breed, which is now apparent in the greater quickness of the gait, and keenness of the eyes.[*]

I have endeavoured to exclude but two breeds, Alderney and Devon. The first, vicious, crooked, and unthrifty—the latter, active, light, "deerlike," and, as Mr. Marshall says,[†] "as dairy cattle, not excellent;" and, as Mr. Lawrence asserts,[‡] "as milkers, so far inferior to both the long and short horns, both in *quantity and quality of milk*, that they are certainly no objects for the regular dairy;" adding, "*they are universally rejected in their own and the neighbouring counties.*"

To refute the opinion that improved short horns require rich pastures and extraordinary care, and to show that they are better milkers, are more thrifty, and as well fitted for hot climates and bare pastures as Devons, the following extract is given from a letter from Governor Lloyd, whose crops often exceeding 60,000 bushels a year; whose neat cattle not less than 800, vigorous and well shaped; whose fine flocks of sheep superior in carcass and fleece, to most that can be found; whose arrangements throughout evincing the utmost precision and skill, may be considered as proofs that his testimony derived from experience, is quite equal to any which can be had, and infinitely superior to all that can be collated from books.

I am, dear sir, your obed't serv't.
JOHN HARE POWEL.

Powelton, June 15, 1825.

Talbot county, Maryland,
Wye House, May 3, 1825.

My Dear Sir,—Many of my half bred Champion heifers (now two years old) have had calves this spring, and, contrary to my expectation, are 50 per cent superior for milk to any breed I have ever had. They have had only the fare of the common cattle on my estate. All of the mixed blood are so much superior to my common stock, that I consider myself well paid for my purchase,[§] by the mixed blood alone which I have reared. My half blood young bull *which you admired*, is now a noble animal.

I have given my mixed Devons a fair trial with my mixed short horns, and it would be only necessary for the most prejudiced or sceptical to see them to decide in favour of the short horns. In size and form there is no comparison, and the short horns are vastly superior for milk.

Yours, truly, EDWARD LLOYD.

John Hare Powel, Esq.

From James Cox, Esq. of Bucks county.

February 2, 1825.

Dear Sir,—It is now about three months since I purchased of you a cow and bull calf, since when, I have given great attention to them, in order to ascertain their value as compared with the common cattle of the country, and have come to the following conclusion:

The cow, considering her age (8 years) and the food to which, at this season, she is necessarily restricted, is a deep milker—the most so of any animal in my possession—a small consumer, and easily kept fat, (surprisingly so, taking into view the quantity of milk yielded,) and is perfectly gentle and docile in her disposition.

The bull, without any extraordinary keep, is much larger than calves of his age, and in his form and appearance more resembles a grown steer than calves of his age, (7 months.) He keeps very fat upon a moderate allowance, and like the cow, is extremely docile. I feel perfectly satisfied that the improved short horns will keep in fine order upon the same quantity of food which, when given to animals of three-fourths their weight, will not be found sufficient to produce the same effect. This I state from actual experiment, and consider the observation perfectly just, as applied not only to my own animals, but to the breed generally.

My improved stock have been viewed by a number of my neighbours, and have been uniformly admired, and as you know, from my experience of their valuable properties, I have been induced to increase the number by additional purchases from among your very extraordinary stock.

JAMES COX.

John Hare Powel, Esq.
Cor. Sec'y Penn. Ag. Soc.

From Mr. Joseph Kersey,

Chester county, 2d Month 12, 1825.

I purchased an half bred improved Durham short horn bull, which I sold at public vendue for one hundred dollars, and I am happy to learn that he has had, during the last season, near one hundred cows. His docility, his aptitude to fatten upon little provender, are admirable. I raised two of his calves, which, when four weeks old, were generally supposed to be two months old, from their being so remarkably fleshy and well grown, although they had not received any thing but the milk from their dams. Robert Clemmens raised one from a cow that would not weigh more than three hundred pounds. He killed the calf at six months old, the meat of which weighed three hundred and thirty-four pounds, for which he obtained ten cents per pound.

There was a cow exhibited at the Paoli, by John Hare Powel; her calf was, at that time, one year and three days old, and had been kept from her for one night, and the next morning I milked from her at least two gallons of beautiful rich milk, and owing to her not being accustomed to being milked, it was impossible to get it all from her.

Taking this breed in every point of view, I consider them better adapted to the use of farmers than any other breed I am acquainted with. They arrive at maturity early, feed quick, are good milkers, and are exceedingly kind and docile; they have more weight in the most important points, viz: the standing ribs, the sirloin, the rump, &c., and have much less offal than cattle in common. Take one of this breed, and another of the common kind, of equal weight; slaughter them and sell them at the different prices the different pieces command in the market, and it will be found that the short horn will return considerably the most money, merely because it has more of the high priced pieces, and less offal.

I am, very truly, thy friend.
JOSEPH KERSEY.

John P. Milnor,
Rec. Sec'y Penn. Ag. Soc.

From David Comfort, of Philadelphia County.

Respected Friend,—I have this morning seen the cow to which Joseph Kersey alludes in the foregoing letter. She has all the appearance of a deep milker. Her calf has been running at her side, I am assured, from its birth; it appears healthy and of good size; it sucked, I am assured, last night and this morning. The cow was also milked last night. She yielded this morning, in my presence, in addition to the consumption of the calf, a quantity of rich milk which I suppose to be equal to about eight quarts. My business is that of a practical farmer. I have therefore purchased her calf of the last year, at a large price, with a view of raising and improving *dairy cattle.* I think the other cows on the farm of the improved breed, have also the appearance of deep milkers. DAVID COMFORT.

John P. Milnor,
Rec. Sec'y Penn. Ag. Soc.

Extract of a letter from Henry A. Carpenter, Esq., an extensive practical farmer, in one of the most fertile, and best cultivated parts of Pennsylvania, to the Corresponding Secretary of the Pennsylvania Agricultural Society.

Dear Sir, *Lancaster county, June 14, 1823.*

The two half blood heifers by the short horn bull Derton, which you stated had calved last July, produced through the course of last winter, butter of a *better quality*, than any I ever saw made in the month of May, and it was always obtained in about ten minutes churning. One of these heifers produced a calf the beginning of June; the other (the three year old.) has supplied nine labouring men all spring with a sufficiency of milk, and butter once a day; which production exceeded that of *a fresh milch cow* of the common stock, which *I had selected with great care, and proved to be as good a milker as the neighbourhood could produce.* I am sorry that I cannot give you an account of the production of butter from the imported cow Moss Rose, in a given time, as her calf had got so old before the trial was made, that it would not take to other cows; but I do not hesitate to give it as my opinion, *that twelve or fifteen pounds of butter* of the finest quality, can be made from her in one week, as she possesses the power of secreting rich milk, in a greater degree than any animal I have ever seen. I expect that this is enough to satisfy you, that as milkers, the Durham Short Horns are not to be surpassed. The bulls are docile and good feeders.

Extract from a pamphlet, "Improved Short Horns and their Pretensions—Liverpool, 1824."

"It is contended, that the two properties of good milking, and a disposition to carry flesh, may be united, where both are duly attended to; and although the very great quantity of the former, which is obtained from the ordinary breed of short horns, will not frequently be drawn from the improved breed, still the deficiency in quantity will be more than atoned for by the superior quality—and increased richness in the milk, being one of the improvements, which has been accomplished in the breed in question.

"The instances which are given as to milk, were obtained by the author on the spot; and though he would gladly have included any others, had they been furnished, it appears to him that no trifling force is afforded to his argument, by the circumstance of the cases which are set forth being derived from one stock; irrefragable proof being thus furnished that they are not solitary instances, but happening in the regular course.

"The cows recorded, are the property of J. Whitaker, Esq., of Greenholme, near Otley, and are of the most esteemed blood. They have given, and give, twice a day, as follows:

Yellow Rose, at 3 years old, 4 gallons 2 quarts.
Yellow Rose, at 4 years old, 4 gallons 3 quarts.
Red Daisy, 4 gallons.
Magdalena, upwards of 4 gallons.
Wildair, 4 gallons.
Western Lady, 3 gallons 2 quarts.

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[*] Herd Book, page 102. Major Rudd's letter, Am. Farmer, vol. iv. page 449.

[†] Marshall's West of England, vol. i. page 242.

[‡] Lawrence's General Treatise on Cattle, 1809, p. 38.

[§] Col. Lloyd paid $1500 for three improved short horns, two years old.

Venus, 16 years old, 3 gallons 1 quart.
Alfrede, 3 gallons.
Adela, first calf, 3 gallons.
Yarm, 3 gallons.
Moss Rose, at all times a moving mountain of flesh, 2 gallons—all wine measure.

"These cows are steady milkers, possessing great inclination to fatten; and Mr. Whitaker cannot be too highly complimented on his successful exertions to combine the two qualities. The remainder of his stock will be found by no means contemptible as milkers; but it is thought unnecessary to remark upon any ordinary quantities."

ON IMPROVING THE NATIVE BREED OF NEW ENGLAND CATTLE.

No. III.

In the last number of the Massachusetts Agricultural Repository and Journal, [No. 3, vol. 8,] are some communications from John Hare Powel, Esq., to the Pennsylvania Agricultural Society, from whose Memoirs they were extracted. The subject of the communications is the various breeds of neat cattle. The Editors of the Repository, in introducing those papers, say—"We give no opinion as to the soundness of Mr. Powel's opinion; we mean to hold an even balance between all the contending parties. This, however, we owe to Mr. Powel, to say, that in zeal, public spirit, industry, and experience, he yields to no man." I have the pleasure of knowing Mr. Powel: and have been gratified in seeing his signal display of talent and energy in applying his ample means to improve the agriculture of our country.

Before I saw Mr. Powel's letter in the Repository, I had told the Editor of the New England Farmer, that I would give him my thoughts on the subject of improving the native breed of New England cattle. In relation to Mr. Powel's views, so far as on this subject they differ from mine, I will offer such observations as appear to me necessary to support the latter.

It was Mr. Powel's object "to establish, by selections from various European works, certain positions which had been assumed by him, in some of his late communications" to the Pennsylvania Agricultural Society. Those positions must have related to "farm stock;" that being the subject of his letters introduced into the Repository. And he justly remarks, "that none is more interesting, and none more important, to the husbandmen and landholders of the eastern, middle, and western states, than that which indirectly involves the application of three-fourths of the product of their labour and of their land;" that is, "for the nourishment of their neat cattle, horses, sheep and swine." "I think it is evident, (continues Mr. Powel,) that to our population at least,[*] it is worth some effort to ascertain, whether experience has established, in the country [England] where they are best known, and by the standard which every man can best comprehend, the superiority of one race of neat cattle over every other, either original or *improved.* If (says Mr. Powel,) it shall appear that by the multiplication of this race, "the produce of beef, upon a given extent of land, would be nearly doubled—the quantity of butter increased—the facility of procuring powerful oxen for draught not lessened—and without that the amount of offal would be diminished—the weight of the flesh and fat would be carried upon the proper parts; I trust it will not be contended that the discussion is futile, or the premium absurd, which shall have brought this race into view."

By "the *standard* which every man can best comprehend," for determining "the superiority of one race of neat cattle over every other," I understood Mr. Powel to mean the *prices* at which they have been sold in England, and he accordingly states them. He says—"It appears by Bailey's Survey of Durham, that at Colling's sale in 1810, seventeen cows sold for 2802 *l.* 9*s.* sterling; [averaging $732 per cow at 444 cents the pound sterling] eleven bulls for 2561 *l.* [averaging $953 per bull]—that Major Rudd paid 400 guineas for Lady of nine years—for Lily 400 guineas—for Peeress 170 guineas—for Petrarch 375 guineas; that Mr. Wetherill & Co paid for Comet, of 6 years, 1000 guineas [$4662.] Mr. Champion and Col. Mellish have since paid 450 guineas for the services of Charles during two years." Mr. Powel continues—"a regular record is kept in the Herd Book, of the pedigrees of the animals of pure blood. Although 140 breeders, 130 bulls, and nearly 3000 heifers and cows are enumerated in this volume, it will be seen by Major Rudd's letter and prices, which I have paid, that their cost continues as high as it was ten years since."

After some other details, and mentioning the opinions of some American gentlemen of the good qualities and great value of the improved short horned breed, Mr. Powel introduces Major Rudd's letter concerning this improved race. Major Rudd says—"to Mr. Charles Colling the world is indebted for the breed of cattle called the Improved Short Horned,"—of which he (Major Rudd) became the purchaser, in 1810; certainly, I am warranted in saying, with the principal, if not the only view, of becoming what Mr. Colling had been, a BREEDER OF CATTLE *for the* PROFIT *to be derived from the sales.* Accordingly he informs Mr. Powel, "that he has never sold any bull, cow or heifer, of the genuine breed, for less than 100 *l.* sterling per head. For this price he would deliver bulls or heifers at Liverpool [when to be shipped for the United States] warranted of the best pedigree, and of the most approved form, handling and hair." 100 *l.* sterling are equal to 444 dollars—or $450 at 4*s.* 6*d.* the dollar.

After stating the prodigious prices given for Colling's stock, Mr. Powel remarks, that "if the cost were regulated by the caprice of men of fortune, it might be alleged that *fashion* gave to them a fictitious value; but as the *practical* farmers of England sanction it by their purchases, and support it by their demands, it must be inferred, that after a trial of *fourteen years,* the animals possess the merit which has been claimed." The *professed breeders* are doubtless *practical farmers*—as was Mr. Bakewell, who was indeed a most extraordinary one, as the quantity of stock kept on his farm would show. But certainly no *mere farmer* in England can find his account in giving 450 dollars a-piece for cows and heifers, to compose his dairy. The average annual product of cows in England, may be six or seven pounds sterling per cow. When Young wrote his tours, it was only 5 or 6 *l.*—a dairy of 30 cows (though there are many larger, there are many of a less number) at 7 *l* each, 210 *l*—a little more than the cost of two cows of the improved short horns. And as the English dairy farmers seldom keep their cows after they are ten years old—oftener turning them off to fatten, or selling them to graziers when past eight—thus keeping them in milk six or seven years—each cow, in that time, would yield the farmer about 50 *l.* ($222) in butter, cheese and veal; to which add 17 *l.* (a high price) for the cow, either fattened or sold to a grazier, and he would receive about two thirds of the prime cost of the cow, six or seven years before. It is true, that mere farmers will never think of making up their dairies of such high priced cows; while the more able may purchase a heifer or two to be put to the high bred bulls, to lay the foundation of a full dairy of them, in the end; or by an experiment with one or two, to ascertain their intrinsic value. Upon the whole, it evidently appears, that *professed breeders* must be almost exclusively the purchasers of such high priced stock as that of Colling's and a few other eminent breeders. And until this breed of cattle shall be extensively multiplied—and in the 14 years since the great improvement is stated to have taken place, the individuals cannot be very numerous—they may continue to bring high prices.

The purchaser of a bull at a thousand pounds, by putting him to ten cows of the same race, may in two years at Major Rudd's prices, by the sale of his offspring—ten heifers and bulls—have his 1000*l.* replaced. But a good bull may, in two years, be the sire of fifty such heifers and bulls, and of fifty calves; or be let, like Charles, to such breeders as Champion and Mellish. The great leader Bakewell, by the superior management of his farm; but especially by his immense profits, arising from his improved stock, chiefly cattle and sheep, must have amassed a fortune; and his genius and industry entitled him to it. His first improved rams were let at very low prices —16 shillings each for a season. He proceeded in his improvements until he could let his rams for the enormous sum of 300 guineas each for a single season. In 1789 he let three rams for 1200 guineas [$5594;] and his whole letting that year brought him full 3000 guineas—equal to $13,986[*]

"The high prices (says Marshall) are not given by graziers, for the purpose of getting wedders as grazing stock; but by *ram breeders* for the purpose of *getting rams* to be let to graziers: the *highest* being given by the *principal breeders only;* not for the purpose of getting rams to be let to graziers as *wedder-getters;* but for that of getting rams to be let again, as *ram getters* to inferior tup-men"—or breeders of sheep.

Again Marshall says—"With respect to the *very high prices,* they are given by a *few first rate breeders,* who are playing a high game—running a hard race—for the *pride* and *profit* of being leader, when Bakewell *is not.*" Bakewell, indeed, *is not;* but doubtless the same passions continue to actuate the "few *first rate breeders;*" and their history, in regard to keep, may, I presume, fairly explain their characters as breeders of cattle. These first rate breeders who keep bulls and rams *to let,* use some art *to make them up* to *show* to advantage *at the time of letting,* particularly in making them excessively fat; for fat covers or conceals defects. Afterwards they are reduced to a plight which fits them for service![†]

The common price of a ram let to a grazier, when Marshall wrote, was five or six guineas for a season; the highest ten guineas, for the sole purpose of getting grazing stock. And as Bakewell's improved breed would get as fat at two years old as other common breeds at three, the grazier would be amply reimbursed for the extra expense of the ram. Used in Bakewell's way (a single leap only being allowed) one ram would serve a hundred ewes, and at ten pounds for his hire, the extra cost of each of his offspring, would be but two shillings —when he would sell at two years and a half old, for ten or fifteen shillings more than other sheep, of the same natural size, and going in the same pasture.

Bakewell improved a breed of horses and of swine. Fifty or sixty years ago, he let his stallions at from 25 to 150 guineas the season.

The improved short horned breed, from their disposition to fatten kindly, and at an early age, must be peculiarly valuable as grazing or beef cattle, in Pennsylvania and other states where horses chiefly, and almost exclusively, are employed in farm labour, and where steers and oxen are raised almost solely for beef. But I have not yet obtained information of the superior character of the few cows of this breed in the United States, for producing butter. Their milk is said to be rich; but its actual product from the churn and the cheese press would be more satisfactory. I am desirous of seeing these tests of its quality. The case of the cow sold by Mr. Welles to Mr. Quincy, justifies my caution on this head. Mr. Welles supposed her milk to be rich, and that on the same food she would yield as much butter as the Oakes cow; yet, though so much larger an animal, Mr. Quincy's careful experiment proved her inferiority, even to the vast difference of one half.

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[*] This letter of Mr Powel's is addressed to the President of the *Pennsylvania* Agricultural Society.

[*] Marshall's Rural Economy of the Midland Counties, vol. i. page 384.

[†] Same volume, page 388.

Ezekiel H. Derby, Esq. has favoured me with an account of a heifer of the improved short horn breed. She and a bull of the same breed, presents from Admiral Sir Isaac Coffin to the Agricultural Society of Massachusetts, were, by the Trustees, committed to the care of Mr. Derby, in Salem, to give to the farmers of Essex an opportunity of putting their best cows to the bull. The heifer, on the 28th of January last, dropped her first calf—a female. A fortnight after, she gave ten quarts of milk in a day, besides what the calf sucked; and about six weeks from her calving, 8 quarts were taken from her; being so much more than Mr. Derby thought necessary to the health and useful thriving of the calf; which is well grown and in good condition. Her milk is pronounced to be rich; but has not yet been brought to the only certain test. Her food has been partly English and partly salt-marsh hay,* with four quarts of corn and cob-meal mixed with chaffed hay, and half a bushel of the common flat or English turnips, daily.

Major Rudd says of the improved short horns, that "if this breed were every where disseminated, the produce of beef, on a given extent of land, would be nearly doubled; that their milk is richer in quality, but less in quantity than of the old breed; and that an improved short horned cow will yield about eight or nine pounds of butter per week, avoirdupois weight." He says also, that in form and *handling*, the improved short horns are a perfect contrast to the old breed; and he *believes* they consume less food: and that "in countries where *beef is in great demand,* the improved short horns are beyond all doubt the best."

Mr. Powell controverts an opinion which has been expressed, that the cattle of Massachusetts are of the Devon breed. "I would contend (he says) that the finest cattle of Massachusetts are mixed with families of which Mr. Gore, Mr. Stuart and Mr. Vaughan imported the sires. Lancaster, Leicester, and Hereford blood, can be traced by a practised eye, in many of the best working oxen exhibited at the New England Agricultural shows."

Although satisfied that the blood of those imported cattle of Gore, Stuart and Vaughan, was here of very limited extent, I have made inquiry to ascertain the facts. From Mr. Gore I have received the following information.

"The bull of English extraction, owned by me about the years 1794, 5, 6 and 7, was by a cow imported from England by Mr. Charles Vaughan.—The bull was dropped from the cow on her passage from England, and given to me by that gentleman, shortly after the arrival of the cow in America.—He proved to be a remarkably fine animal, large, and of excellent form. His proportions were all good. According to my recollection, he was as handsome and large as any bull I have since seen. I gave to the man who superintended my farm, all he could obtain for his services. *I have no belief that many cows were brought to him.* During my absence in Europe, he became unruly; and about the year 1798, my agent sold him, and, as I understood, to a man living in Vermont."

"The observation expressed to me by Mr. Jay, to which you refer, was shortly after his return from Great Britain [which was in 1795.] He remarked, that the cattle which he had generally met in New England, appeared to be of the Devonshire breed, that he had seen in Great Britain."

Now although I suppose the Devon race of cattle to be *predominant* in New England, I doubt not that some of other breeds were early introduced by our ancestors; some Herefords unquestionably, whose descendants are yet distinguished by their *white faces.* The following concludes Mr. Marshall's minute description of a good Herefordshire ox: "The coat neatly haired, bright and silky; its colour middle red, with a 'bald face;' the last being esteemed characteristic of the true Hereford breed."* By "bald face" (marked by Marshall with commas, as a local expression) *white faces* are doubtless intended. White faced cattle, of our native stock, are now often to be seen; but I think less frequently than in the early part of my life.

Of Mr. Stuart's animals, the following is his own account, as verbally stated to a friend from whom I received it. That he sent to England for two heifers and a bull of the Bakewell breed: that they were shipped—but that the bull and one of the heifers were left on the passage; that the other arrived at Philadelphia, when he lived at Germantown, where, a few months after, she brought forth a fine bull calf; that shortly afterwards, being determined to remove to Boston, he sent thither the cow and her calf, where they were delivered to Mr. Joseph Russel, who sent them to his island below Boston, where they for some time remained and propagated the breed, [but certainly within narrow limits, especially as they were kept on an island] that they were not large animals, but easily made fat, and on coarse fodder; that the cow was not a great milker, seldom giving more than six quarts [at a milking, must be understood,] under the most favourable circumstances; but the milk was rich: that they were of a liver colour, spotted with white; some of the calves white, with liver coloured ears: and that he sold them to Mr. Bowdoin, who sent them to Nashaun, one of the Elizabeth islands, (his property,) where both of them died; poisoned, as Mr. Stuart thinks, by eating hemlock plants in the spring of the year.

From this history of the Gore, Stuart, and Vaughan imported cattle, it may be possible to trace some of their progeny in the neighbourhood of Boston, perhaps a few in Vermont, and a very small number in Maine, if Mr. Vaughan took his cow into that district: but on the New England stock at large, it is certain no effect could have been produced, by any or all of them.

From the writings of Young, Marshall and others, it appears that farmers in England entertained different opinions concerning the several breeds of cattle; some preferring the long horned, especially Bakewell's highly improved race; while others chose the improved Holderness, or short horned. Others again, preferred the native breeds of their respective districts. So in our own country, opinions vary. Mr. Powel disapproves of the lately imported Devons† and their offspring. Of these I can say nothing, having seen none of them. But in some parts of England there are Devonshire cattle which are highly prized. "It has been found by a person in the vicinity of the Devizes, Wiltshire, who, as well as his father before him, has been in the habit of letting cows to men who supply the town with milk; and who buys all his cows, and consequently can have no partiality for any particular sort, *having at different times had all kinds;* that the milkmen have uniformly, for the last thirty years, given the preference to the Devonshire sort, at the same price, as being, on the whole, the best milkers."*

T. PICKERING.

SHEEP—No. 5.

Mr. Editor,

From 1808, up to 1811, sheep of the home breeds, in some instances slightly touched with merino, were shown for the cups. The seventh anniversary was remarkable for three out of the four candidates, being of merino blood. The following account of the Exhibition, will show the weight and fleece; although the term unwashed is used, it is not properly applicable, as all the lambs prepared for the shows were pet lambs, had been very carefully and cleanlily kept, and had little or no foreign matter in their fleeces.

"Four tups were shown for the prize cup of sixty dollars value, as follows:

Coton, native blood, property of Mr. Lee, of Coton—Weight of carcass unclipt, . .	145 lbs.	
Do. of fleece, unwashed, .	8	1 oz.
Columbus, quarter blood merino, property of D. M. Chichester, Esq.	111	5
Fleece, unwashed, ...	6	4
Fairfax, half blooded merino, property of John C. Scott, Esq. . . .	94	
Fleece, unwashed, ...	6	8
Gunston, quarter blooded merino, property of George Mason, Esq. . .	123	8
Fleece, unwashed, ...	6	3½

The judges, after minute and very careful examination of the comparative merits of the several candidates, in conformity to the rule of decision furnished them by the proprietor of the institution, (viz. general excellence,) unanimously adjudged the prize to the tup bred by J. C. Scott, Esq. of Strawberry Vale, Fairfax county."

Thus it will be seen, that an half bred merino, being a cross of merino upon the native stock, produced the heaviest fleece in proportion to the weight of carcass.

The merino strain began about this time very generally to be adopted, in all parts of the United States. I had long combated the merino opinion, in a correspondence with Chancellor Livingston and other eminent men, till finding myself almost left alone, I made a merit of necessity, and went with the tide. Mr. L. had made me a present of a Rambouillet merino of great value, with which I in time bred away all my long wool, and became merino in toto. But I had previously sent abroad many of my Arlington long woolled, some to my friends, and some to endeavour to raise a fund to establish a perpetual premium for American cloth, to be annually adjudged at the seat of government. Any of those gentlemen, or their neighbours, who received those sheep, will do a most acceptable service, by informing of the success which attended their introduction to the various parts of the country, whither they were sent. A very fine young ram was sent to Thomas Miller, Esq. of Powhatan, Virginia, but his success has not been heard of.

The tide has now turned, and numerous applications are made to me for long woolled. I am rallying again under the flag of long woolled, and breeding from a Bakewell of the breed of Mr. Barney—but I fear that the wool of the Persian, of sixteen inches, "I shall ne'er look upon its like again."

I received also as a present, a ram and ewe, brought from the island of San Fernando Aronha, in the Southern ocean. They were nearly hairy, resembling goats, and died on the approach of winter.

It appears that there are only certain parallels of latitude where wool bearing sheep will flourish; when you exceed these, either by too much north or south, the fleece degenerates to hair, but the flesh is found of excellence in almost all climates. Of the original, or parent sheep, Luccock relates—"The mouflon, the argali of Dr. Pallas, which is now perhaps entirely banished from Europe, bears so great a resemblance to our domestic sheep, and possesses so many of its properties, as to be deemed by naturalists the parent stock. The fleeces are indeed so much alike, that the description of one answers almost equally well for that of the other. They consist in summer of a short hair, sleek and resembling that of a deer; in winter of wool, like down mingled with hair, every where an inch and an half long at least, concealing all its roots; a fine woolly down, of a white colour in general. It is now confined almost, if not entirely to Asia, and is so shy, that as new colonies settle, it retreats from their observation, to the most wild and naked rocks, where it delights to bask itself in the unintercepted rays of the sun.

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* *English Hay* is a term I do not recollect to have met with out of New England. By it is meant that mixture of grasses which constitute good upland meadow, such as our ancestors knew in England. They used the term to distinguish this upland hay from the wild, coarse, wet-meadow and salt-marsh hay of the country.

* Rural Economy of Gloucestershire, vol. 1, p. 247.

† I believe these were a present to a gentleman in Maryland, from Mr. Coke, of Norfolk, in England.

* Rees' Cyclopedia—Art. *Dairying.*

"Observing in this manner, the different kinds of fleeces which are produced in countries where domestic animals have undergone the least alteration, and remarking how nearly they correspond with the coats of those which retain their native wildness, we perceive the astonishing effects of cultivation. The celebrated burdens, borne by the sheep of Spain, Persia, and Cachemire, were doubtless in their original state, as coarse and hairy as those produced on the wastes of Tartary, or among the morasses of Siberia. It is probable that in most, if not all these countries, the race which now inhabits them, is a breed imported from some neighbouring region. But history, which is always defective in the narrative of rural affairs, is not sufficiently explicit to enable us at this distant period, even to guess at the time when they were first introduced; nor can we trace from it the different stages of their improvement. Those of Spain, probably, were brought from the opposite coast of Africa; and England is undoubtedly indebted for the flocks which adorn her pastures, to various parts of the continent.

"Certain it is, however, that the amelioration of the flocks has always been closely connected with the progress of the arts and of civilization; for we uniformly find in countries where these have flourished, a race of sheep which yield wool much superior to that which we find all around them.—Where the best blessings of social life have been but little cultivated, we sometimes meet with the strong and shy argali, which bounds before its hunters, anxious for those recesses which never were imprinted with the human footstep. But where the mattock of agriculture turns the soil, the goat and its kindred sheep, little differing from each other in their shape, or their fleece, crowd around the tent of the herdsman, and demand that care which is necessary to their subsistence."

Man can certainly, sir, do much, but not all; nature must and will do her share—climate and soil will have their due influence upon all animals, whether for food or fleece. The care of man in selecting various breeds of animals, is a truly important step toward bringing them to perfection, but unless he shall place them in those latitudes adapted to their several natures and properties, but little benefit will result from his knowledge.

Sheep appear by Providence to have been intended for the use of all mankind, in a more or less degree, and hence are found in nearly all the countries of the globe; and it is very certain that the arts of civilization have produced far greater improvements than belong to the animal in its savage state. But that sheep, if left to the influence of climate and soil alone, and that climate and soil peculiarly adapted to their nature and necessities; that they will not degenerate, but rather improve, I am disposed to believe from the experience of the Sea Island sheep of our own country, of which I shall speak hereafter. In reference to the power of nature over all animals, I would beg leave to cite an example, in the Arabian horse, taken from my address, published in 1808.

The Arabian horse, while roaming in his native deserts, gathers strength and activity from the quantity of exercise necessary to obtain his food. The chieftain who subdues this tyrant of the herd, takes care to preserve his former habits, that he may convert those habits to his own use. He is not immured in close stables, covered with cloths, or submitted to the farrier's skill, but rests in ease and happiness at the door of the tent, cheered by the attentions of his friend, and participating in the hospitalities of the family. Thus fitted for service, and preserved in those habits which nature at first had formed, the Arabian horse outstrips the wind, and bears his master in triumph o'er the field.

The breeder, like the physician, should endeavour to assist nature, and not to counteract her laws, and by studying the habits of animals in their native state, he may find a data from which better systems may be formed than from all the hypotheses extant.

Respectfully, yours,

G. W. P. CUSTIS.

Arlington House, June 17, 1825.

MARYLAND CATTLE SHOW.

REPORT OF COMMITTEE ON VOLUNTEER PREMIUMS.

The committee on the volunteer premiums have given to the subject of the premiums offered for *essays* on two important branches of rural economy, that earnest and serious attention which the importance of the subjects and the characters of the donors seemed to entitle them to.

The first which presented itself, following the order of publication, was the silver cup, offered by that liberal and public spirited citizen Robert Oliver, Esq. "to the author of the best essay on the natural history of the mule, and its value for the general purposes of agriculture, in comparison with horses." For this premium there were six competitors, and several essays of great merit; giving a mature consideration to them respectively, and observing exactly the terms on which the premium is offered, the committee award the premium for the best essay on this subject, to Samuel Wyllys Pomeroy, of Brighton, in Massachusetts. It might be deemed invidious to other competitors for this prize, to speak of them by name. For the purposes of this communication, it is sufficient to state, that, at least one of the other essays contained matter which would have added to the practical value of that of Mr. Pomeroy, though inferior to it in other respects, and particularly in what relates to the natural history of the animal, which it appears to have been an important part of the object of the donor to draw forth.

For the other essay, "on the value and use of oxen, in comparison with horses, in the middle and southern states, accompanied by a description of the best method of gearing and breaking them," the committee after a mature and deliberate examination of a number of able and practical essays on the subject, do award the premium of a silver cup of the value of $25, patriotically presented by the venerable Charles Carroll, of Carrollton, to Thomas P. Stabler, of Montgomery county, Maryland. His essay is considered entitled to the premium, as conforming to the intention of the donor, which doubtless was, to elicit the best practical information on the subject.

The committee take much pleasure in stating to the friends of the agricultural society, that the compositions on both the above subjects demonstrated the growing interest which is felt in the improvement of agriculture, and the advantages which result to the community by the labours and contributions of the association. So much merit was evinced in the various communications on both the subjects proposed, that, if the terms on which they are received would allow of it, each might be entitled to particular mention. They hope yet to see some of them usefully occupying the columns of the American Farmer.

JOSEPH GALES, Jr., *Chairman.*

Mr. Editor,

In the report of the committee upon horses for the late Cattle Show, mention is made of a "two year old colt from New York," as being "the property of Mr. Stephen Eustis." As you express a desire that all inaccuracies, which should accidentally occur in the statement, might be pointed out, it may not be amiss to observe, that the colt belongs to Mr. Vanbrugh Livingston, of Westchester county, N. Y., and was sent by him to the above named exhibition.

AMICUS.

June 13, 1825.

WHITE FLINT WHEAT.

Mr. Skinner, *Bremo, June* 15, 1825.

In your inquiries about the white flint wheat sown last fall in Maryland and Virginia, I presume you allude to what has been sometimes called Cayuga, or New York white flint wheat. I received a barrel of this wheat from Gen. S. Van Rensselaer, of Albany, which was carefully sown in good time. It is not quite ready to be harvested, but sufficiently advanced towards ripeness for me to pronounce that it "withstands the attacks of the hessian fly," in every respect, as well as our well-known lawler—which it so exactly resembles, in every particular of grain, growth, time of ripening, and, lastly, being mixed with a portion of the peculiar darker coloured heads which I have always seen accompanying the lawler, that I cannot resist the conclusion, it is the same wheat.

Yours, respectfully,

JOHN H. COCKE.

AGRICULTURAL PROSPECTS.

EXTRACT TO THE EDITOR.

Dear Sir, *Edisto Island, S. C., May* 16, 1825.

Since February, we have experienced a succession of very boisterous and inclement weather. The last month was unusually cold and rainy, and about four weeks since, the crops of cotton planted in March and the early part of April, were so seriously injured by a severe gale, that even now many of our farmers are replanting. In the hope that good weather would revive their plants, they neglected to apply the only remedy upon which they could rely. The cotton crops are, therefore, very backward, and unless we are blessed with a late fall, a good harvest cannot be anticipated.

The present high prices for cotton, and the probability of an advance the next year, have induced many of our planters to neglect the corn crop. As there will no doubt be a very great want of that article in the fall, our friends at the north and east may reasonably calculate on ready and profitable sales. So long as the price of cotton is high, so long will the southern states need a large supply of corn.

Respectfully, yours,

WHITEMARSH B. SEABROOK.

HORTICULTURE.

PEACH WASP.

Mr. Skinner, *Bremo, May,* 1825.

Until this and the last spring, I had never found the Peach Wasp in the chrysaloid state earlier than July, but for the most part in August. (See American Farmer, vol. 1, p. 350.) In many instances this spring, I have discovered them in that state which immediately precedes their existence in the fly form, as early as the last of February and first of March: and subsequently, in the spring examination of my peach trees, I found many of the worms just commencing their destructive ravages, in a very minute state—clearly indicating that they had but recently come forth from the egg. Hence, I infer these eggs were deposited by flies transformed from the chrysaloids of February and March. This change in the attack demands a corresponding change in the defence.

I have hitherto kept this enemy at bay, by posting my guards in time to meet the July and August generation of flies. In future, I apprehend, we must prepare ourselves against a spring invasion also; for, from the various sizes and conditions of the worms I examined this spring, I have every reason to conclude, there is in reserve for us, the usual supply of summer.

I once believed, the co-operation of all the individuals of a neighbourhood, in destroying all the old neglected peach trees, which serve as so many nurseries of this fly, and carefully protecting every peach tree that was permitted to stand, would exterminate the evil, within prescribed limits; but, to say nothing of the difficulty of effecting such a co-operation, there is now reason to believe that this enemy to the peach, is propagated in some of our forest trees. I have found a worm resembling it, in every appearance, in the common red oak—and I am informed by Tucker Coles, Esq., of Albemarle, that he had discovered it. since the almost entire destruction of the peach trees of the Green Mountain, in the young chestnuts of the forest. This destructive insect, which was unknown in this part of Virginia 25 years ago, now threatens in a few years more to leave not a peach tree standing, if not carefully and regularly protected against its ravages.

The Rose-bug of the eastern shore of Vicginia, has made its appearance on the western side of the Chesapeake within a few years past. Hitherto a very few have been seen. They are in considerable numbers here this spring, (60 miles above the head of the tide.) They have not, as yet, done any serious injury to the flowers and fruits, of which they are so destructive in the lower part of the state—but from the activity and thriving appearance of this year's race, I think it probable, their descendants of the next, may inflict upon us some of the evils which our fellow citizens of the eastern shore have so long complained of. If any of your readers in that quarter can provide us with a remedy against this new enemy, it will be at once rendering us a friendly service, and subserving one of the objects of your valuable paper.

Yours, respectfully,
JOHN H. COCKE.

BOTANY.

PINNOCK'S CATECHISM OF BOTANY;

BEING A PLEASING AND FAMILIAR DESCRIPTION OF THE VEGETABLE KINGDOM; IN WHICH THE LINNÆAN CLASSIFICATION OF PLANTS HAS BEEN ADHERED TO, AND SUITABLE EXAMPLES OF EACH CLASS GIVEN.

> "On every thorn delightful wisdom grows;
> In every rill a sweet instruction flows."—Young.

FROM THE SIXTH LONDON EDITION.

CHAPTER I.

Introduction.

Question. What is Botany?

Answer. Botany is that science which arranges and distinguishes all plants or vegetables, and teaches us their peculiar properties and uses.

Q. What productions of nature are included under the name of plants or vegetables?

A. Plants or vegetables are all those productions which possess life, and derive their nourishment from the earth in which they grow.*

Q. Are they not extremely numerous?

A. Yes: it is supposed there are upwards of twenty thousand species of plants, which compose, what naturalists have termed, the *vegetable kingdom;* nor will this number appear so very surprising when we consider that the whole surface of the earth is covered with them. About 2000 of these are natives of Great Britain, of which nearly one half are mosses and the like.

CHAPTER II.

Of the Structure of Plants in General.

Q. Of what does a perfect plant consist?

A. A perfect plant consists of the trunk or stem, the root, the leaves, the supports, the flower, and the fruit.

Q. What is the trunk or stem?

A. The trunk is composed of six *organic* parts, namely:

1. The *cuticle* (or *epidermis,*) which is the outward thin covering, answering to the skin of animals.
2. The *outward bark* (or *cortex,*) which protects the plant from the effects of the cold.
3. The *inner bark* (or *liber.*)
4. The *alburnum,* which is a soft white substance, situate between the inner bark and the wood.
5. The *wood* (or *lignum,*) which is the compact *fibrous* substance, surrounding the pith.
6. The *pith* (or *medulla,*) which is a soft white substance, and in young plants is very copious, but diminishes as the plant grows, and at length disappears.

Q. What is the *root?*

A. The root, which enables the tree to stand firm in the ground, and which *absorbs* the juices from the earth, necessary for its growth, by means of small fibres, is a continuation of the trunk descending into the earth, and consists of the same parts, although less conspicuous.

Q. What are the *leaves?*

A. The leaves, which differ much in their forms and manner of growth, consist of an immense number of fibres, termed the *nerves* of the leaf, but which are merely its *vessels,* running in every direction, and branching out into innumerable small threads. The surface of the leaf, like the skin of animals, is full of pores, which serve both for *respiration* and the absorption of dew, air, &c. thereby nourishing the plant, and contributing to its growth.

Q. What are the *supports?*

A. The *supports* (or *fulcra,*) are certain external parts of plants, which are useful to support and defend them from enemies and injuries. They are divided into seven kinds.

Q. Describe them.

A. 1. *Tendrils;* which are small strings that are not strong enough to stand alone; but support themselves by embracing some shrub, &c. near to them. The vine and pea will serve for examples of this.

2. *Floral leaves;* which are very small leaves placed near the flower.

3. *Stipules;* small leafy appendages, situate on the sides or below the leaf, to protect it when *emerging* from the bud.

4. *Foot-stalks;* these support the leaf, and defend and convey nourishment to the bud.

5. *Flower-stalks;* or foot-stalks to the flower and fruit.

6. *Arms;* which is the term given to the offensive parts of plants; as thorns, prickles, stings, &c.

7. *Pubes;* a name applied to the defensive parts; such as the hairy, woolly, or clammy substances common to certain plants.

Q. What is the *flower?*

A. The flower is that temporary and beautiful part of vegetables which is intended for the introduction of the seed. It consists of seven principal parts, namely: the calyx, corolla, stamen, pistil, pericarp or seed vessel, seed, and receptacle; the four first belong properly to the *flower,* and the three last to the *fruit.**

Q. What are *annual* plants?

A. Plants are said to be annual, when they are sown, blossom, produce seeds, and die, in the course of one year.

Q. What are *biennial* plants?

A. Those plants which totally perish the second year after they have been sown are termed biennial.

Q. Which are *perennial* plants?

A. Such as continue alive in the ground for several years.

CHAPTER III.

Parts of Fructification.

Q. What parts of a plant are necessary for the young botanist to be first acquainted with?

A. The flower and fruit; these consist of seven parts, as before observed, which are particularly requisite to be known, as on them the classification of plants, according to the system of Linnæus, is founded.

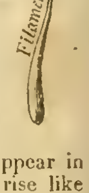
Q. What is the *calyx?*

A. The calyx, empalement, or flower-cup, is the green part which is situated immediately below the blossom. Its chief use is to enclose and protect the other parts of the flower. It sometimes consists of two or more leaves, as in the rose, and sometimes tabular, is like the cowslip, &c.†

Q. What is the *corolla?*

A. The corolla, blossom, or what is commonly called the flower, is the part which is most beautifully coloured, of the finest texture, and often smells sweet. The leaves which compose the corolla are called *petals.*

Q. What are the *stamens?*



A. The stamens or chives, which are situated in the centre of the flower, are composed of two parts, one long and thin, by which they are fastened to the bottom of the corolla, called the *filament;* the other thicker, placed at the top of the filament, called the *anthera,* which opens when it is ripe, and discharges a yellowish dust, called *pollen* or *farina,* from its being like flour.*

Q. What are the *pistils?*

A. The pistils, or pointals, commonly appear in the centre of the corolla, from which they rise like so many columns. There are from one to twelve, or more, in each flower. The pistil consists of three parts.

Q. What are they?

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* The following is a more scientific definition:—Plants or vegetables are all those bodies which have organization and life, but are destitute of sensibility and the powers of voluntary motion, deriving their nourishment from the earth in which they grow.

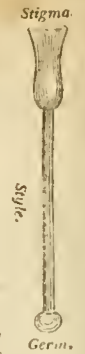
Organ′ic, *a.* consisting of various parts so constructed as to co-operate together.
Fi′brous, *a.* composed of fibres, thread-like.
Absorb′, *v.* to suck up.
Respira′tion, *s.* the act of inhaling, breathing.

Emer′ging, *part.* coming forth, rising into view.

* By the flower and fruit, or parts of fructification, the species of each plant may be for ever renewed: all other modes of propagation, such as by buds, grafts, or layers, will sooner or later have their termination.

† Although the colour of the calyx is usually green, yet in some plants it is of other colours. In some instances, also, the calyx remains till the seed is ripe, as in the dead nettle; in others it falls before the flower is at maturity, as in the poppy; while the lily, and some others, appear to be wholly without it.

* This dust, falling on the stigma of the pistil, is the cause of complete fructification.



A. The *germ*, the *style*, and the *stigma*. The *germ* is the pedestal or base of the pistil, generally of a roundish shape, though sometimes slender. Its office is to contain the seeds which are not yet arrived at maturity; the *style* is the pillar or thread which supports the stigma; and the *stigma* is the highest part of the pistil.*

Q. What is the *pericarp?*

A. The *pericarp*, or seed-vessel, is the case or covering of the seed, and is the external part of the germ come to maturity. It is of various shapes, globular, as in the poppy; long, as in the pod of the pea; pulpy, with a stone in the middle, as in the plum; pulpy, containing seeds inclosed in a case, as in the pear; juicy, and containing seeds which have only an external case, as the gooseberry.

Q. What is the *seed?*

A. The seed of plants is that part of every vegetable which, at a certain state of maturity, is separated from it, and contains the rudiments of a new plant, though the parts are too minute to be discerned by our organs of sight.

Q. What is the *receptacle?*

A. The receptacle, or base, is that part which supports and connects the whole together. In some plants it is very conspicuous: particularly, for instance, in the artichoke; the whole of the lower part, which we eat, being the receptacle.

Q. When is a flower said to be *superior?*

A. A flower is superior when the receptacle of the flower is above the germ.

Q. When is it *inferior?*

A. When the receptacle is below the germ.

Q. Is not a flower sometimes called *naked?*

A. Yes; it is said to be naked when the calyx is absent.

Q. Are not flowers sometimes called *complete*, and at other times *incomplete?* *

A. Yes; a flower is complete when it has both a calyx and corolla; and incomplete when either of these are deficient.

Q. What is an *aggregate* flower?

A. An aggregate flower is a flower composed of florets standing on foot-stalks, attached to a broad receptacle.

Q. What is an *umbellated* plant?

A. An umbellated plant is one which sends out towards the top, from the same point or centre, a number of branches, like the spokes of an umbrella, and bearing flowers on the top, as the carrot, parsnip, and parsley.

CHAPTER IV.

On the Classification of Plants.

Q. What is intended by the classification of plants?

A. For the more easy comprehension of the science of botany, Linnæus divided the whole vegetable creation into twenty-four *classes*. These are again divided into *orders*, which are subdivided into *genera* or tribes; and these genera are further divided into *species*, or individuals.

Q. What may this division be likened to?

A. A class resembles an army; an order, a regiment; a genus, a company; and a species, a soldier.

Q. On what are the characters of the classes founded?

A. The characters of the classes are taken from the number, connexion, length, or situation of the stamens.

Q. You say there are twenty-four classes; how may they be distinguished?

A. In each of the first twenty classes there are stamens and pistils in the same flower; in the twenty-first class they are in distinct flowers on the same plant; in the twenty-second, in distinct flowers on different plants; in the twenty third, they are in the same flower, as well as in distinct ones; and they are not all to be seen in the twenty-fourth class.

Q. As no progress can be made in botany till the *names* of the classes are well understood, I will thank you to inform me whence they are derived, and then repeat them.

A. The names of the classes are formed from Greek words, and express the characteristics of each class. The first ten classes are named from the Greek numerals, and the word *andria*, which the student must consider as meaning the same as stamens.

CLASSES.	
1. Monandria,	One stamen.
2. Diandria,	Two stamens.
3. Triandria,	Three stamens.
4. Tetrandria,	Four stamens.
5. Pentandria,	Five stamens.
6. Hexandria,	Six stamens.
7. Heptandria,	Seven stamens.
8. Octandria,	Eight stamens.
9. Enneandria,	Nine stamens.
10. Decandria,	Ten stamens.
11. Dodecandria,	Twelve stamens.
12. Icosandria,	Twenty stamens.
13. Polyandria,	Many stamens.
14. Didynamia,	Four stamens, two longer.
15. Tetradynamia,	Six stamens, four longer.
16. Monadelphia,	Filaments united at bottom, but separated at top.
17. Diadelphia,	Filaments in two sets.
18. Polyadelphia,	Filaments in many sets.
19. Syngenesia,	Stamens united by antheræ.
20. Gynandria,	Stamens and pistils together.
21. Monœcia,	Stamens and pistils in separate flowers, upon the same plant.
22. Diœcia,	Stamens and pistils distinct, upon different plants.
23. Polygamia,	Variously situated.
24. Cryptogamia,	Flowers invisible.

CHAPTER V.

The Classification of Plants explained.

Q. The principles on which the classes are formed are certainly simple, and easily to be comprehended: but it will be necessary for us to go over them again, and distinguish the properties of each class more particularly before we proceed farther. Tell me, therefore, how the first ten classes are known.

A. All plants which have only one stamen are of the first class; those that have only two are of the second; those that have only three are of the third; and so on, the number of stamens being the same as the number of the class in the first ten classes.

Q. How is the eleventh class (Dodecandria) known?

A. The eleventh class contains all those plants, which have from twelve to nineteen stamens, fixed to the receptacle.

Q. How is the twelfth class (Icosandria) known?

A. By having twenty or more stamens, fixed to the inside of the calyx. In this class the place of insertion is more to be relied on than the number of the stamens, for there are sometimes less than twenty, and sometimes more.

Q. What plants are comprehended in the thirteenth class (Polyandria?)

A. Those that have more than twenty stamens attached to the receptacle.

Q. What distinguishes the fourteenth class (Didynamia?)

A. When there are four stamens in a flower, of which two are longer than the others, it belongs to the fourteenth class.

Q. How may the fifteenth be known?

A. Tetradynamia, the fifteenth class, is known by having six stamens in the flower, four of which are longer than the other two.

Q. Describe those of the sixteenth class (Monadelphia?)

A. In the sixteenth class the stamens are united by their filaments into one set, forming a case round the lower part of the pistils, but separating at the top.

Q. How may the seventeenth class (Diadelphia, be distinguished?

A. In the seventeenth class the corollas are papillionaceous, or like a butterfly, as the blossom of a pea; the stamens are connected by their filaments, but divided into two sets, one of which is thicker, and forms a case round the pistil; the other is smaller, and leans towards the pistil.

Q. How is the eighteenth class known?

A. In the eighteenth class, (Polyadelphia,) the stamens are united by their filaments into more than two sets or parcels.

Q. By what means may the nineteenth class be known?

A. Syngenesia (the name of the nineteenth) consists of compound flowers, as the common daisy or dandelion; and they are called compound, because each single flower consists of a collection of little flowers or florets, attached to the same broad receptacle, and contained within one calyx.

Q. What distinguishes the twentieth class, (Gynandria?)

A. In the twentieth class the stamens are attached to the pistil.

Q. By what means may the twenty-first class be known?

A. The twenty-first class (Monœcia) contains those plants which have flowers of different kinds on the same plant, some bearing pistils, and others stamens only.

Q. How may the twenty-second class (Diœcia) be known?

A. The twenty-second class consists of those species which have stamens on one plant, and pistils on another.

Q. What kind of plants does the twenty-third class (Polygamia) comprehend?

A. The twenty-third class comprehends those plants which have at least two, and sometimes three kind of flowers. 1. Some with pistils and stamens in the same flower. 2. Others having stamens only. 3. Or having flowers with pistils only.

Q. What are comprehended in the twenty-fourth class?

A. The twenty-fourth class (Cryptogamia) comprehends all plants in which the flowers are invisible to the naked eye, as mosses, ferns, mushrooms, sea-weeds, &c.

MISCELLANEOUS.

ITEMS,

Selected from late English papers received at the office of the American Farmer.

There is at present, at Stralsund, an extraordinary Elephant, which has been taught to manœuvre a piece of artillery. He brings a 48-pounder up to the ramparts, loads it, rams it down, points it, lights the match, and fires the cannon, all in seven minutes and a half.

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* Numerous experiments have been made to ascertain the importance of the *Stamina* and *Pistilla* to the production of perfect seed, and the results have been uniformly conclusive. In fact, although botany, as a science, was little understood by the ancients, yet they were aware of the importance of these two parts of the flower in maturing the fruit of the palm tree; for those trees bearing stamens only were carefully planted among those that bore the pistils, that the dates (the fruit) might come to perfection; and in the present day, in those countries where this fruit is an article of food, it is scrupulously attended to.

METEOROLOGICAL.

[Quantity of rain which fell in Glamorgan county, in Wales, during the last year—inserted to gratify those who keep meteorological tables in our own country, and make comparison of the climates of different countries.]

Although the quantity of rain we have noted during the past year may be found in your Journal, we have again stated it below, as some of your readers may not have your Journal at hand to refer to.—We trust we may not have so great a quantity to record again as the last four months present:

	Inches.	*Dec. pts.*
January	2	0
February	3	30
March	2	60
April	2	70
May	3	20
June	4	30
July	2	40
August	2	30
September	6	70
October	6	95
November	9	60
December	7	75
	12|53	80
Average per month	4	48 4
Do. for the last 4 months	7	75

Signor Gulnini lately died near Parma, at the age of 138 years. He was the first tenor in Italy, and the leader of the band of Pope Benedict XIV.

The letters from Egypt state, that the greatest attention has been lately given to the cultivation of sugar. It is also stated that the Pacha has transmitted orders to England to send out immediately persons acquainted with the manufacture of rum. We believe two gentlemen are already engaged for this undertaking.

The fleeces of 2,623 sheep were exported under the regulations of the new act, between the 1st of December, 1824, and 5th of January, 1825.

At the sheep and cattle sale, held at Claughton-hall, near Garstang, one fine young ox was sold to a butcher from Chorley, for 57*l.* 10*s.*

The Duke of Devonshire has purchased the first edition of *Hamlet*, from Messrs. Payne & Foss, for nearly 200 guineas.

ON LADIES' EVENING DRESSES.

When dressed for the evening the girls now-a-days
  Scarce an atom of dress on them leave;
Nor blame them—for what is an evening dress,
  But a dress that is suited for Eve? ADAM.

RECIPES.

EXCELLENT METHOD OF REARING CALVES, AND OF PRESERVING THE CREAM AND A GREAT PART OF THE MILK, DURING THAT TIME.

Put some water on the fire, nearly the quantity that the calf can drink; when it boils, throw into it one or two handfuls of oatmeal, and suffer the whole to boil for a minute. Then leave it to cool until new-milk warm; then mix with it one or two quarts of milk that has stood twelve hours, and has been skimmed; stir the whole and give it to the calf to drink. At first it is necessary to make the calf drink by presenting the fingers to it; but it soon learns to do without this help, and will grow incomparably faster than by the old method.

This method is not only a theoretical truth, but its success is confirmed by experience. The economical advantages resulting from it are as follows: According to the old method, a calf intended for slaughter is made to suck for three weeks; and those intended for agriculture from six to eight weeks. Supposing the cow gives only a moderate quantity of milk, the value of it will amount, in three weeks, to nearly the value of the calf. If, on the contrary, we rear a calf according to this method, we consume during the three weeks only three quarts of oatmeal at most, and the skimmed milk—calves that have been brought up by this method have been always healthy and strong, and not subject to disease. They are not suffered to suck at all, but to have the pure milk of the mother to drink for the first four days; because it has been observed, that the separation after four days is more painful to the mother than when the calf is taken from her soon after its birth.

NEW METHOD OF CLEARING FEATHERS FROM THEIR ANIMAL OIL.

Take for every gallon of clear water, a pound of quick lime; mix them well together; and when undissolved lime is precipitated in fine powder, pour off the clear lime water for use at the time it is wanted. Put the feathers to be cleaned in another tub, and add to them a sufficient quantity of the clear lime water to cover the feathers about 3 inches; when well immersed and stirred therein, the feathers when thoroughly moistened will sink down—and should remain in the lime water three or four days; after which the foul liquor should be separated from the feathers by laying them on a sieve. The feathers should be afterwards well washed in clean water and dried on nets, the meshes being about the same fineness as those of cabbage nets. The feathers must, from time to time, be shaken on the nets; and as they dry they will fall through the meshes, and are to be collected for use. The admission of air will be serviceable in the drying, and the whole process may be completed in about three weeks. The feathers, after being thus prepared, will want nothing more than beating for use, either for beds, bolsters, pillows, or cushions.

EASY METHOD OF CURING THE SEA SCURVY.

The root of the garden carrot abounds in nutritious saccharine juice, and is slightly aromatic. These are desirable properties against the scurvy. To experience the good effects of these properties, the *roots must be eaten raw.* There is nothing unpleasant in this: on the contrary, it is what the common people often do by choice. These roots would keep well during the longest voyage, packed up in casks, having the interstices filled with sand; each sailor might be allowed to eat one root every day, or every other day, according to the state of his health and the quantity of roots on board.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 24, 1825.

TOBACCO.—Four hogsheads Tobacco, made by Mr. Outerbridge Horsey, on his farm in Frederick county, sold for $23 per hundred round.

Inspections in Baltimore during the last week, at the three state warehouses—No. 1, 200 hhds.—No. 2, 200 hhds.—No. 3, 265 hhds. Total, 665 hhds.

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Col. J. H. Powel, in Reply to Col. Pickering on Native Cattle, No 2—On Improving the Native Breed of New England Cattle, by Col. T. Pickering, No. 3—Essay on Sheep, by G. W. P. Custis. Esq., No. 5—Maryland Cattle Show. Report on Volunteer premiums—White Flint Wheat—Agricultural Prospects—Peach Wasp—Pinnock's Catechism of Botany—Miscellaneous Items from late English papers—Recipes—Prices Current.

PRICES CURRENT.

ARTICLES.	per	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams,	lb.	7	9		
COFFEE, W.I. Green,	—	16½	17	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	30		
Georgia Upland,	—	22	26		
COTTON YARN, No. 10,	—	45			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould,	—	12	13	14	16
Dipt,	—	10	11	11	12
CHEESE,	—	6	8	10	12
FEATHERS, Live,	—	35	38		
FISH, Herrings, Sus. new	bbl.	2 18		2 25	
Shad, trimmed, new,	—	6	6 50	7 00	
FLAXSEED, Rough,	bush	1			
FLOUR, Superfine, city,	bbl.	4 75			
Fine,	—	4 25			
Susquehanna, superfi.	—	4 62½			
FLAX,	lb.	9	11		
GUNPOWDER, Balti.	25 lb	5	5 50		
GRAIN, Indian Corn,	bush	47	48		
Wheat, White,	—	95	1 00		
do. Red,	—	85	90		
Buckwheat,	—	55	75		
Rye,	—	45	47		
Barley,	—	50			
Clover Seed,	—	3	3 25	3 50	3 75
Ruta Baga Seed,	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed,	—	2 25			
Oats,	—		22	25	
Peas, Black Eyed,	—	95	1		
Beans, White,	—	1	1 12		
HEMP, Russia, clean,	ton	215			
HOGS' LARD,	lb.	8	9		dull
LEATHER, Soal, best,	—	24	27		
Eastern Tan,	—	18	20		
MOLASSES, Havana,	gal.	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 62		1 75	
Pitch,	—	1 50	1 75		
Turpentine, Soft,	—	2 62			
OIL, Whale, common,	gal.	25	27		
Linseed,	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime,	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES,	bush	62	75		
RICE, fresh,	c.lb.	3 50	4		
SOAP, Baltimore White,	lb.	14		18	
do. Brown,	—	6	8	8	10
WHISKEY, 1st proof,	gal.	23	23½	37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—	28	30		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown,	—	10 25			
Louisiana,	—	9	10 20	10	12
Loaf,	lb.	15	24	15	25
Lump,	—	15	16	16	17
SPICES, Cloves,	—	1 10		1 25	
Ginger, Ground,	—	7	8		
Mace,	—	3 00		3 50	
Nutmegs,	—	2 50		3 00	
Pepper,	—	20		25	
SALT, St. Ubes,	bush	44			
Ground Alum,	—	60	65		
SHOT, all sizes,	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. Sicily,	—	1 10	1 15		
Lisbon,	—	1 30			
Claret,	doz.	3	7		
Port, first quality,	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed,	—	28	30		
Common, Country,	—	20	30		
Skinners' or Pulled,	—	30	35		

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AGRICULTURE.

ON IMPROVING THE NATIVE BREED OF NEW ENGLAND CATTLE.

No. IV.

I contend for no particular breed of cattle, to the exclusion of all others. It is doubtless a correct opinion, "that in most of the *genuine breeds* there are differences in the *individuals.* And as many of the mixed breeds afford excellent milkers, it may be the best mode, in order to establish a good dairy stock, whether for butter or cheese, for the farmer to breed from such cows, of whatever kind they may be, as he has found from experience the best for the purpose."* But where a stock *entirely new*, is highly recommended, he can, in the first instance, only have recourse to the experience of others: and when its superiority is established by the only sure test— the greater quantity of butter or cheese from the same food—he may safely adopt it. And in rearing young cow-stock, common sense, (the attention being roused to the subject,) will direct every farmer to select his calves from the best milkers, having regard to the quality as well as the quantity of their milk. And this rule of selection applies as well to the *male* as to the *female* calves. In both, the situation of the *teats* will deserve attention: the farther apart the better. I much doubt whether any cow whose teats were very near together, was ever a prime milker.

Because some cows will give milk till they calve, their value has been supposed to be proportionably advanced. I am inclined to think that this is an error. I recollect the observation of a friend, made to me more than fifty years ago, as the result of his experience with two or three cows carefully attended—that a cow ought to go dry about five weeks before calving, *that her bag might be filled and distended with milk*, the effect of which would be a much more abundant supply of milk afterwards. This same friend, at a subsequent period, kept a herd of forty cows to yield milk for sale. And his son informs me that his father continued to practice by the same rule. Another friend, whose personal attention also was given to the subject, has experienced the same effect, even to the difference, in one instance, in his estimation, of one third in the quantity of milk. In the great dairy county of Cheshire, in England, the same opinion is entertained; and the farmers permit their cows to become dry ten weeks before calving. This practice, however, may arise in part from their custom of feeding them, when dry, with wheat, barley and oat straw, until within three weeks of their calving.—It is said, however, by the writer on dairying, in Rees' Cyclopedia, that if cows are *well fed*, the drying them off their milk for any time before calving, is wholly unnecessary. Mr. Powel says, "the secretions of milk are certainly augmented by milking carefully and systematically, stripping every drop from the udder; but I have not found the duration of a cow's milk in any wise affected by the period at which she had been dried, previous to the birth of her young." But he then remarks that "few cows [if left to themselves, as in a state of nature, I suppose is meant,] allow their calves to suck longer than within two months of the time of parturition. During the latter stages of gestation, the fœtus requires those portions of nourishment from which the secretions of milk must necessarily detract." He adds, "I would turn off fine cows two months before the birth of their young." Mr. Cramp, the owner of the famous Sussex cow, expresses the same opinion, as to the duration and quantity of a cow's milk Yet the varying products of his own cow, in butter, in different years, as given by himself, supports the general opinion; as may here be seen.

1st year, in 48 weeks, his cow yielded of butter, - - - - - -	540 lbs
2d year, in 45 weeks, having gone dry 17 days, - - - - - - -	450
3d year, in 51¼ weeks, having gone dry 37 days, - - - - - -	675
4th year, in 42½ weeks, having gone dry 19 days, - - - - - -	466
5th year, in 48 weeks, having gone dry 48 days, - - - - - -	594

This 5th year she had twin calves, which she suckled nine weeks, during which she yielded no butter.

In his details of her weekly milk and butter. Mr. Cramp says he left off milking her on the 15th of February, 1809, and that she calved the 3d of April following; yet he says afterwards, that she gave milk, this year, until she calved—she would not go dry: but the milk was brackish, and fit only for the hogs.

Mr. Cramp's and Mr. Oakes' cows have been called "prodigies," and so, indeed, they were when compared with other cows. But with their *constitutional disposition* to yield from the same food, much more rich milk than cows in general, must be combined the extraordinary *keep* of both; which enabled them to produce such immense quantities of butter. In 1813, Mr. Oakes cow, then four years old, yielded only 180 lbs. of butter; but this being about double the quantity usually obtained from a common cow, Mr. Oakes was induced to improve her *keep;* and in 1814 she yielded 300 lbs. of butter. He then still farther increased her food, in quantity and quality: so in 1815 she yielded over 400 lbs. Finally, feeding her to the full, with as much rich and varied sorts of food as he could tempt her to take, she in 1816, in 32½ weeks after her calf was killed, yielded 467 lbs. of butter, to which add the 17 lbs made while her calf sucked, and we have the 484 lbs. stated in the Repository. In the last week, ending December 20, she yielded ten pounds of butter. And if in the next week she gave only six pounds, and in the ten following weeks 5 lbs per week, making 56 lbs. and this quantity be added to the 484 lbs., we have 540 lbs.—just three times as much as she yielded the first year, on *common keep.* Hence it may fairly be presumed, that the production *of at least half of her butter,* arose from her being supplied to the full, with a variety of good, and in part with the richest food. Mr. Cramp, having described the various and abundant quantities of food given to his cow, and his manner of treating her, says—"he thinks that cows would nearly double, in the course of a season, their quantity of milk and butter, by following his plan."

Considering how little attention was formerly given—if indeed any were given—to improve our native breed of cattle, it is not surprising that a very few of a superior character should now be seen. I doubt not, however, that enough may be found of which, in a few years, a most valuable stock may be raised, if only one or two substantial farmers in every township would engage in the undertaking. The Agricultural Society of Essex county in 1823, offered liberal premiums for this object, the claims to be received and decided in 1828. In the present year they make like offers of premiums on claims for such *improved* cattle, in 1829 and 1830.

Mr. Powel and Major Rudd mention, as of very material importance, that the improved short horns "handle" well. The latter gives the following description of this race. "A small and fine head—a capacious chest—the shoulders lying back in the body—the ribs round and barrel like—the back straight from the neck to the top of the tail—the loins wide—the hind quarter long and straight—the twist full and deep—the bone small, and offal light. To these points of shape must be added the great essential of *good handling.* This was formerly not considered in this country, but has now become essential, since it has been discovered to be the *touchstone* as it were, or *index*, of the propensity to fatten." I do not know to what period of time past Major Rudd's "formerly" was meant to be applied. But certainly Bakewell understood and practised on the art of "handling," 50 or 60 years ago, when he had conceived, and practised upon those principles of breeding which have been the guide of other breeders from that to the present time. I recollect that in some of Arthur Young's works, which I met with I believe from 30 to 40 years since, he describes this matter of *handling* as a most important point, in Bakewell's opinion, and perfectly familiar to him as an old established principle; and gives the following striking illustration of it. Bakewell told him, that if obliged to choose cattle in the day time, by *seeing* them only, *without feeling*—or in the dark by *feeling* only, *without seeing* them—he would prefer choosing them in the dark by *feeling.* And he endeavoured to make Mr. Young practically acquainted with this art of determining the disposition of the animal to thrive and fatten well, by *handling* him. The evidence of that disposition was a certain mellowness of the flesh, which was obvious to the touch of that experienced breeder, and which enabled him to discriminate and decide the character of the animal simply by feeling of him.

But although it was Bakewell who first made breeders sensible of the importance of *good handling*, I presume there is no observing farmer who, on the mention of it, would not assent to it as correct, and immediately say, that a *hide-bound* ox or cow would be a bad "feeder."*

A *hide-bound* beast, I take it, is just the opposite to one whose *mellow feel* would indicate a disposition to thrive and fatten kindly. This term *hide-bound* is familiarly transferred from unthrifty cattle to hard bound land; which having been kept long in grass, cropped constantly, and never manured, has become hard and unproductive. Such land demands the plough and manure to make it *mellow.*

Of the extraordinary disposition to fatten, Marshall mentions a cow of Mr. Princep's, a superior variety of the long horned breed, and rising 5 years old. When they ceased to milk her, she was put on prime keep for eight months, when she was slaughtered. She was "cracked on the back"—that is, was cloven along the chine; but the skin had separated from the vertebræ (back bones) which were entirely grown over, and buried a considerable depth in fat: her *bosom* was *broad*—her flesh *mellow*—her *bone extremely fine.* Her fore leg was exactly the size of a Scotch bullock of not half her weight. She cut six inches of fat on the chine; and weighed, each fore quarter, 361 lbs; one hind quarter 374 lbs., and the other 372 lbs.—total 1468 lbs. of beef.

In this part of Massachusetts, the victuallers inform me that the average weight of our common cows, fattened to be good beef, is 100 lbs. a quarter.

Young, in his Northern Tour, crossed the country to Cheshire, the county famous for cheese.—He says their breed of cows was in general small, and would not fatten to above 32 stone—that is, to 448 lbs., or 112 lbs. a quarter, round for the beef.

According to Sir John Sinclair, the hide, tallow, head and tongue, heart, and every other part of the animal, except the four quarters of beef, are considered as offal.

Bakewell's superior skill as an agriculturist enabled him to surpass his neighbours in the management of his farm, as well as of his live stock. The farm consisted of 440 acres, 110 of which were arable, and the rest grass. He kept 60 horses, 400 large sheep, and 150 beasts of all sorts. He bought neither straw nor hay; all his animals were in high flesh. His cattle, Young says, "were all fat as bears." A brook ran through his farm, the water of which he could turn over from 60 to 80 acres, put into a proper state for the purpose of being flooded, at suitable times, and so rendered very productive in grass and hay.

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* Rees' Cyclopedia— Art. *Dairying.*

* English farmers call cattle put to *fatten*, "feeders;" good or bad *feeders*, as they thrive well or ill.

I have observed that English writers on husbandry, mention the propriety of adapting cattle to the sort of land of which farms consist: if rich in grass, choose a large breed; if the pastures are poorer, select a smaller breed, because, they say, in the latter case, smaller cattle would do well: while on the same poorer soils the large breeds would be unprofitable. These observations refer to pasturage only: for in that part of the year in which cattle depend wholly on the *stall*, large cattle may be as well fed as small ones. But in *raising* cattle, I suppose that the *pasturage season* is chiefly relied on for the growth of our young stock; and the short grass of our pastures in general, are probably better adapted to a small than a large breed. However, with the disposition now prevailing, to improve and render our lands more productive, many farms may become suitable to that middle sized race which may be produced by a cross of our native cows with the large imported bulls. To what degree such crosses may prove advantageous—of all the farmers in Massachusetts, those of Worcester county, especially those in the vicinity of the high bred bull Denton, will be best able to decide. Experiments may be made, even where there are only two or three of the Denton blood; by keeping their milk by itself, and seeing how much butter it will produce. To make a fair comparative experiment, an equal number of native cows, equal in quality to the dams of the half-breeds, should be fed in the same manner as the half-breeds, the feed of both, for quantity and quality, to be the same. Or if the half-breeds, being larger, require, and are allowed more food, they ought to yield a proportionally greater quantity of butter. The native experimental cows ought to be as nearly as possible, of the ages of the half-breeds. T. PICKERING.

SHEEP—No. 6.

Mr. Editor,

I would ask permission, to continue a few more remarks from my Address of 1808, on the impropriety of confinement, to wool-bearing animals, &c.

"The practice, common in Europe, of immuring animals in close houses, called shelters, is very detrimental both to their health and vigour, in this country. Those which are intended for the knife, may with some propriety be treated in this way; but such as are to form the breeding stock, should not be denied the air and exercise, so essential to all constitutions.

"Sheep are particularly delicate in some respects, and very liable to be injured by unwholesome atmosphere; and we know that those which frequent the mountainous parts of most countries, are an hardy vigorous race." Even folding in the open air will not answer in the southern latitudes, where the temperature is so liable to change. My friend Fitzhugh, of Ravensworth, who farms largely in the sheep way, has suffered severely from folding. My small flock at this place are perfectly in *puris natura libus*, having neither shepherd, dog, fold, or shelter, and they appear to take very good care of themselves. I give them a large pasture ground, and presuming that the selection of their food, their time of taking it, of lying down, and of getting up, and, in short, all their little economies, must be better known to them than can possibly be known "to my philosophy," I leave them to themselves on the "let me alone system"—and they prove the truth of these doctrines, by being always in good order—and as fatness is supposed to be a sign of content, I have no doubt but that they are perfectly as they should be.

The origin of the Smith island sheep is not accurately known; they are supposed to be the sheep of the country, (first, of course, obtained from England,) put on the island many years ago, and improved by the hand of nature. Previous to the late war, the stock of sheep consisted of about 600, and of cattle about 200. The occupation of the island by the naval forces of the enemy, produced almost the extinction of the stock of both kinds—scarcely fifty of either sort remaining at the return of peace. Since which period they have slowly recruited: but the great distance of the island from my residence, (200 miles,) prevents me from making those experiments in sheep farming, which I should have been happy to have done, were it more within my reach. I hope to be able to let it to some judicious and enterprising person for a term of years—and from the terms which I would give, I flatter myself that such person would have no cause to repent of his bargain.

Smith's island is computed, by those who have been conversant with it for many years, to contain 2,000 acres of pasturage—and this is the pasturage of all seasons, the whole stock which it has carried for a great length of time, never having cost a sixpence for their keep. I found the beef and mutton very fat there in November, and the mutton in June. The English officers were pleased to say, that they had never eaten better.

"The sheep on Smith's island are perfectly wild, and so unconscious of the care of man, as to fly at his approach. They are taken in spring and fall, by certain stratagems, and sheared each time, after which they are given to liberty and uncontrol. The growth of wool must be very rapid, since the period of a few months produces a second harvest for the shears.

"It may be rather advisable to retain the Sea island sheep as nearly as possible in their primitive state, since it affords a partial security from depredation, and no doubt contributes to their health and superior quality of fleece. Animals in a state of nature, teach us many lessons derived from instinct, which puzzle even our mighty reason—and we often search, in vain, among the works of genius and knowledge, for truths which nature alone chooses to reveal."

The wild sheep feed at particular hours, and always with their heads to windward, inhaling the breeze from the ocean, which sets in at a particular time. I never discovered or heard of the smallest disease, among these sheep, and am disposed to believe that they live to a far greater age than their brethren in a more domestic state. I shot a very ancient patriarch of the flock, in 1804—his teeth were worn entirely away, and his eyes grown "dim with age." He may have been a pet lamb to the pirate Blackbeard, who was in the habit of frequenting the island in former times, and, it is said, buried much treasure there—the discovery of which would be very acceptable to the proprietor, in these latter days.

Both the sheep and cattle are so shy of the great destroyer, man, as to be approached with extreme difficulty—greater than would be the approach to an herd of deer. The cattle are very fierce when wounded. One instance occurred during my visit in 1804, in which a bull, after receiving four balls, pursued one of our men into the surf, keeping him for some moments exposed to the alternatives of death by land or water. When finally rescued by the slaughter of the animal, the poor fellow shook his ears, and declared himself perfectly satisfied with bull hunting for the rest of his life.

A ram and four ewes, were caught on Smith's island, and sent to Arlington, many years ago. The wool of the ram was soft, silky, and beautifully white. These sheep retained their wild habits, not associating with the flock till winter, when they became, from necessity, more domestic—but the ensuing summer, from frequenting low, moist grounds, they rotted and died. The bone of these sheep was peculiarly small; they were about the usual size, and their wool various, two of them having very fine, and three indifferently so.

The samples of Smith's island wool, which I sent to all the societies, and individuals zealous in such matters, a good many years ago, obtained the unqualified admiration of all who received it, and is spoken of in various publications of that date. It has enabled me to maintain a position, which I took in the outset of my endeavours in the cause of domestic economy, viz: That the United States of America possess a portion of every climate and soil known in the world, to be necessary or beneficial to the growth and perfection of wool bearing animals. 2d, that the native sheep of Smith's island, being indigenal, and unimproved by other than the effects of climate and soil, are evidence of these great operating causes, and the extent to which they exist in the United States—and, 3d, that these important and essential natural advantages, being duly cherished and employed, the United States may fairly expect to produce and preserve, a race of wool-bearing animals equal to those produced in any of the other countries of the world.

The rot, the most formidable and fatal disease belonging to sheep, is unknown on the salt pasturage of the Sea islands. A very simple mode of remedying this great evil, may be applied any where, viz: to fence it off, as you do yellow fever in towns. The rotting grounds are easily known by being always good snipe grounds, abounding in springs and little stagnant pools, to which the sheep resort in dry seasons, from the freshness of the herbage.—The snipe is an excellent test of these grounds. I completely drained a small place of this description, and the result has been, that I have neither killed a snipe, nor lost a sheep there since.

Another great enemy of this useful and unoffending animal, is the dog. I have also a panacea for this evil, viz: accustom your sheep to sleep at a particular place, by giving them salt at that spot at night fall. They will repair thither when done feeding, and having licked the salt, lay down and rest. My sheep always sleep at my house door, and the dogs belonging to the house are their protectors—for the sheep biter will never approach where there is another dog. Or if your sheep rest at the farm, have a moveable kennel, in which chain a dog, no matter of what kind, and place the kennel at the resort of your sheep; upon the approach of the sheep biter, he will smell the other dog and retire—or the chained guardian will make a great noise, knowing he cannot run away, which will effectually preserve the flock. For your own dogs, young ones particularly, tying them to the ram is a certain cure for their disposition for sheep biting, only let the discipline be sufficient. I have thought that it were a pity, some of the bad dispositions of man could not be butted out of him in early youth; how much would it lessen the evil-one's kingdom in this world.

You find, my dear sir, that I have used the privilege of an old servant of the cause, by occupying, very liberally, the columns of your valuable journal. It is time for me to hand in my valedictory, and make my bow, which will be done in my next. I conclude this letter by an extract from one which I received in 1807, from the hon. Governeur Morris, one of the conscript fathers of the revolution; a distinguished diplomatist and statesman, and an excellent judge of both men and things. It will be consolatory and encouraging to the farmers of all countries, and those whose attentions may be turned toward rural affairs, and to you, sir—the

American Farmer,—whose labours in that good cause have been deservedly attended with so much success.

"By turning your attention to husbandry, planting, and the rearing of quadrupeds, whatever may be your success, you will have at least this consolation—that the objects of your care will not be guilty of ingratitude: those who spend their lives in the service of mankind, have not so fair a prospect."

Respectfully, yours,
G. W. P. CUSTIS.

Arlington House, Jan 24, 1825.

WASHINGTON AGRICULTURAL SOCIETY.

Jonesborough, Ten. April 11, 1825.

At a regular meeting of the society, held this day, the president, Thomas Emmerson, Esq. delivered an address on subjects connected with the interests of agriculture. After which a communication from Thomas G. Watkins, M. D. on the subject of the falling or lodging of wheat, was read: also, a letter addressed by John F. Dufour, of Vevay, Indiana, to the corresponding secretary, making certain inquiries relative to the culture of the vine.

On motion of Col. Taylor, it was

Resolved, That the society tender to Doctor Thomas G. Watkins, their late president, its acknowledgments for his public spirited exertions for the honour of the society, and for the interests of agri culture.

Resolved, That the committee of correspondence be empowered to procure a plough of the best construction, for the use of the society; and that the treasurer furnish the money necessary to make the purchase.

Resolved, That each member of this society appear at the meeting on the second Monday in April next, clothed in the manufacture of East Tennessee.

Resolved, That the address of the president, the communication of Doctor Watkins, and the above resolutions and proceedings be transmitted to the editors of the American Economist, Knoxville Register, Knoxville Enquirer, and American Farmer, for publication.

D. A. Deaderick, *Rec. Sec'ry.*

[It would be utterly impossible for us to publish one-fourth part of the agricultural addresses that are ordered to be published in the American Farmer. It was not difficult to do so six years ago, when this paper was established; but since that period, these associations have multiplied without number; and much as we esteem the compliment of having addresses furnished for publication, and highly as we admire them, in most cases, for their intrinsic merits, we are yet unable to do more than extract the *practical hints* they convey—and, in some cases, to give such portions of them as throw light on the peculiar features and productions of the country where they are delivered. This explanation, it is apprehended, may serve for all future cases, and save us from the imputation of disrespect to the authors, or the matter of any address which may be forwarded. One hint only would we venture to give, without intending to apply it in any particular case—and that is, that those who are appointed to deliver these addresses, would do well to avoid all apologetical flourishes and long preambles about political economy, and matters and things in general. The more *practical* the better.]

Extract from the Address of President Emmerson.

"But if considerations of a general nature are insufficient to awaken our utmost ardour, and to call forth all our energy for the improvement of our soil, there are others arising from our local situation and peculiar circumstances, which it would be madness to overlook. Blessed by Providence with a climate which, in point of salubrity, is equalled by few, and exceeded by no portions of the globe—with a soil which, though inferior in natural fertility to much of the country lying westward, was yet in this respect greatly superior to that lying eastward; abounding in streams admirably adapted to manufacturing operations, but with an obstructed and temporary navigation, it was obvious that until our population and the circumstances of our country should lead to the erection of numerous and extensive manufacturing establishments, our principal reliance for profit must be on the raising of live stock, to be disposed of in the eastern and southern markets. While our soil retained its original fertility, and the country east of us its comparative sterility, this resource could not fail us. The superior productiveness of our soil, enabled us to compete successfully with our eastern neighbours, notwithstanding the great advantage arising from their proximity to market; and at the same time our greater proximity to market, enabled us to compete with our western rivals, notwithstanding the superior fertility of their soil. Necessity has at length compelled many of our eastern fellow citizens to choose between the alternatives of an improvement of their soil and migration to the west. Some have chosen the latter, and thereby added to the number of our rivals, at the same time diminishing the demand and increasing the supply. The west are successfully engaged in the improvement of their soil. Should they progress in improving, and we in deteriorating our respective soils, it is easy to see that the period cannot be far distant when we shall be no longer able to compete with them in the market of live stock. On what, then, shall we rely? On manufactures. But manufacturing establishments require not only capital, salubrity of climate, water power and raw materials, but cheap and abundant supplies of labour and provisions. To succeed, therefore, as a manufacturing country, we must have capital, a dense population, and an abundance of provisions. To obtain these, especially the two latter, we must have a fertile soil. This we can yet obtain, with comparatively great facility.—Our lands are very susceptible of improvement, and the means are at hand. Red clover, as well as most other grasses, flourish luxuriantly. The quantity of vegetable matter which our soil yet yields, affords the means of procuring abundant supplies of manure. Gypsum is obtained at no great distance, and limestone and fuel are abundant. Industry in the use of these materials, aided by a judicious system of cultivation, would soon restore our lands to their original fertility, and enable us to progress in their improvement, with continually increasing rapidity. If, then, with the consequences of our folly so plainly disclosed to us, we obstinately persist in a course of agricultural practices utterly irreconcilable with the prosperity of our country, we shall merit the fate that awaits us, in being compelled to choose between emigration to a more fertile region, and poverty and distress, in a country highly favoured by nature, but rendered frightfully barren by our own exertions. These alternatives are before us, and we must speedily make our election, or wisely determine to retrace our steps, and to profit by the experience of others, whose example we have too long blindly followed. But it may be said we are in debt, and must adopt whatever course shall promise most speedily to relieve us. This is unfortunately true; but the remedy lies not in fruitless and unavailing efforts, laboriously to extract from the earth, products which we have rendered her incapable of yielding; but in strict and rigid economy, accompanied by industry judiciously applied. If these will not save us, nothing can. It is much to be lamented, that our people should have suffered themselves to be so long deluded into the unfounded belief, that the superiority of our political institutions might alone be safely relied on to secure us permanent prosperity. When, in consequence of the late unparalleled state of the world, the produce of our labour commanded high prices, and wealth flowed rapidly into our country, we were taught to ascribe our prosperity solely to the freedom of our institutions, and to confide in its perpetuity—this error led to habits of idleness, extravagance and wild speculation, the true causes of all our embarrassments. Vanity appeared to be the leading trait in our national character. We seemed to claim it as one of our privileges, to be exempt from the operation of the laws which govern the moral world; and even when a change in the affairs of the world, which we ought to have foreseen and provided against, unexpectedly took place, we still deluded ourselves with the vain hope that our misfortunes arose from causes of a temporary character, which would soon pass away. Nay, we were taught to believe that the rest of the world could not subsist without us. Hence the innumerable political nostrums to which we were exhorted to have recourse for the relief of our embarrassments. Instead of relying on industry and rigid economy, to remove the evils which the want of them had produced, we were vainly looking to legislative interference in some shape or other, forgetting that there was no other honest way of getting rid of debts, than by paying them; and that the government had nothing to give us but what it took from us. Nay, even now, when the fallacy of such expectations has been so often demonstrated, too many are still looking to similar projects for relief. It is by no means my design to depreciate the value of free institutions. They are truly invaluable when rightly appreciated; but if relied on as substitutes for virtue, intelligence, industry, or economy, the result must ever be disappointment. Let us, then resort, in good earnest, to those means, and those alone, by which our situation can be improved. I mean industry, integrity, and economy. The first will insure us the confidence of others, and perhaps either the voluntary indulgence of our creditors, or the aid of those who have it in their power to assist us—the two latter will supply the means of our emancipation; for let it be remembered, that to be in debt is to be in slavery. In order to accomplish this desirable end, however, we must abandon a course too generally pursued, which forms an insurmountable barrier to our pecuniary prosperity; it is the practice of requiring the prospect of a high price for our produce, before we will consent to make it. We must have money, and it can only be obtained by the produce of our labour, or the sale of our property. The price of our produce, like that of all other people, must be proportioned to the price where it is consumed, and the expense and risk of transporting it thither. The lower that price is, the greater should be our exertions to make up by the increased quantity, for the decreased value. This is peculiarly necessary as respects our live stock; because the greater trouble, expense, and loss of time, in collecting a drove of horses, hogs, or cattle, where they are scarce, and to be collected from a large tract of country, will and ought to be taken into consideration by purchasers; because it is an item seriously affecting their profit. Let it be once generally known that stock are so abundant, that droves can be as easily and speedily collected here as elsewhere, and we shall soon find that instead of having no market, or being compelled to sell to adventurers without capital, who perhaps will never pay, drovers will be ready to purchase with money, at such prices as the eastern market will justify, and it is unreasonable for us to expect more. Under an improved system of agriculture, I am convinced experience will demonstrate that more profit can be made at the present low prices, than under the present one, at the highest we have ever obtained, because the increase in quantity will more than compensate for the diminution in value. It is mortifying to think, that our neighbours in Kentucky, who have to drive their stock from 150 to 300 miles farther than we have, should be every day seen travelling through this state with fine droves of stock, or returning with large sums of money arising from the sale of them, while we are sitting down in despondency, complaining that the prices are too low to justify our raising them. By industry, economy and agricultural skill, ours may soon be rendered one of the most desirable sections of the Union. By indolence, extravagance, and a persistance in our former habits, it must ultimately become a barren wilderness. If, contrary to all expectation, our people should elect the latter alternative, let us, my friends, have the consolation of reflecting, that our efforts were not wanting to produce a different result.

To excite, and to gratify a desire for agricultural knowledge and improvement, nothing will be found more efficient than the perusal of the various publications which of late abound both in foreign countries and in our own. Amongst the latter, I would most earnestly recommend that valuable work, the *American Farmer*, published in Baltimore, by John S. Skinner. Were this paper generally circulated among us, I am persuaded that the effect would be a rapid improvement of our country.—Should it be objected that the times are too hard to authorize incurring the expense, I would answer, that every intelligent farmer who will avail himself of the knowledge to be derived from the perusal of that paper, will find himself, even in a pecuniary point of view, by no means a loser. Besides, could not some of us save the expense, by discontinuing our support to some of those vehicles of calumny, ribaldry and party rancour, which serve only to deceive and corrupt the people, to sap the very foundation of our government, and to degrade our country in the estimation of all virtuous and intelligent men. I by no means wish to depreciate the merit of those political publications which are conducted with candour, decency, and ability, and which furnish us with useful and correct information relative to our political concerns. The more extensive the circulation of these, the better; but it must be admitted that those of an opposite character abound in the United States to an injurious extent.

Since our last meeting, I have received a copy of Sir John Sinclair's "Code of Agriculture." For this valuable addition to our small library, we are indebted to the patriotism of Jesse Beane, Esq., formerly of this state, now of Alabama, who has presented it to our society as a testimonial of his regard for his native state.

I have endeavoured, my friends, to perform the task expected of me, as well as my capacity and the want of health and leisure would permit. I am aware that some of my remarks are not very flattering to our vanity. They appeared to me, however, to be founded in truth, and therefore to demand attention. Under more favourable circumstances, they should have been more fully illustrated. As it is, they are submitted, from the purest motives, and with an earnest desire that they may soon be more ably elucidated by one more competent to the task.

The other business of the society now demands our attention.

Extract from the communication of Dr. Thomas G. Watkins, read before the Washington Agricultural Society.

Dear Sir, *Careland, Feb. 22, 1825.*

In our efforts to advance the improvement of Tennessee agriculture, it would seem to be an important desideratum to ascertain, as early and as satisfactorily as may be done, whether there is any practicable method for increasing the product of wheat per acre, without its falling, or *lodging*, as more technically expressed, from over luxuriance in the stalk. Gentlemen of correct practical observation, have assured me, and I have witnessed something of the fact myself, that a crop of wheat that will yield fifteen bushels to the acre, in East Tennessee, will *fall* more than a crop in some other parts of the United States, yielding from thirty to forty bushels. What is the cause of this difference, and if any, what the remedy? I beg leave to propose, through you, sir, to the Society, that, as soon as the funds will admit of it, a premium of a complete set of the "American Farmer," or any other, if any other preferable work can be had, be offered to any member of the society, who shall furnish the most profitable and satisfactory information upon this subject.

I am, respectfully, your most obed't serv't,
THOMAS G. WATKINS.
Secretary, Washington Agricultural Society—Jonesborough.

PRACTICAL HINTS.

FROM AGRICULTURAL ADDRESSES.

Extract from an address delivered by W. M. Barton, Esq., *at a meeting of the Agricultural Society of the Valley, Virginia.*

It will be recollected, gentlemen, that when I had the honor of addressing you, twelve months since, I directed your attention to a subject of great practical importance to farmers,—I mean the improvement of lands by the application of manures. I then advised you to make experiments at least, and in this way to ascertain the expediency of turning under green crops, as an auxiliary to the litter of your farm-yards. In this country, it is impracticable to pursue any rotation of your principal crops, that will improve your lands, support your families, and insure you a reasonable profit, without great attention to the article of manures. By uniting green crops with your barn yard and fossil manures, you will be enabled to return to the soil as much fertilizing matter as is annually withdrawn from it; and by pursuing the system recommended by our best farmers, of always having twice as much of your lands in grass as in wheat, you not only prevent them from deteriorating, but you insure them certain and positive improvement. Let me here recommend to you the renewed application of plaster paris to your lands. I am aware that many of you who formerly reposed the most implicit confidence in its virtues, and applied it extensively, have lately abandoned its use altogether, under the impression that it was either injuring your lands, or, at best, had become useless and inoperative. Rest assured you do it great injustice. Admit that plaster has from its improper application been the means of impoverishing our lands; this is no argument against its proper and reasonable use. You may as well refuse to employ iron implements upon your farms, because weapons of war are made of the same material; you may as well object to the use of the most salutary medicine, because somebody has been injured by incautiously taking a double dose; nay, you may upon the same principle, reject the very aliment of life—your ordinary meat and drink—because gluttony and intemperance have slain their thousands. By the excessive use of plaster, your lands were suddenly stimulated; and all their energies being called into action at once, their produce was immense beyond all former example. The vegetable matter that had been accumulating for years, was, by some peculiar property in the plaster, extracted from the baser soil, and converted into living plants. This, although an admirable process, was necessarily of limited duration. The sole virtue of the plaster consisting in this,—its effect upon dormant vegetable matter,—as soon as this matter became exhausted, the plaster, having no subject to operate upon, of course, became inert and worthless. Return to your land some portion of the *plaster food*, either in the shape of green crops or barn-yard manures, and I venture to predict, you will restore to plaster its primitive virtues. I speak confidently, because I speak from experience. I have this year received from the use of plaster as decided a benefit as I ever witnessed in my life.

We now come to the more particular mention of barn-yard manures. Under this head may be arranged the litter from your stables, the straw from your barns, and the corn-stalks and other rough provender from your fields. The most experienced farmers differ materially as to the proper time for applying this species of manure. One will tell you that vegetable matter should be spread upon your soil in its perfectly dry state. Another, that it should be partially fermented before it is applied; and a third, that it should pass through all the stages of decomposition in your stercoraries before it is fit for use. The latter doctrine is supported by many of the Pennsylvania farmers, whose opinions on this subject are entitled to great consideration. The two first are principally entertained by Virginia cultivators. You must not infer, from this difference of opinion, that either party is in error The system which certain peculiarities of soil and climate may recommend in one country, may be very exceptionable in another; and indeed it frequently happens, that upon different parts of the same farm it is prudent to apply manure in different stages of its decompositinn. If your land be cold, adhesive and ungrateful, it is advisable to apply it in its perfectly dry state; for, by its fermentation, that degree of warmth in which the soil is deficient, will be supplied; its tenacity will be destroyed by its mechanical influence—and it will be rendered generous and productive. But, if your lands be sufficiently porous, and only so far unproductive as arises from the absence of fertilizing matter, which is certainly the case with a large proportion of our lands, I would advise the application of manure after it had undergone a partial decomposition in your barn-yards. After all, there can be no established or universal standard on this subject: your judgment must dictate the proper course to pursue under the various circumstances that may exist.

I shall this day, however, present to the society, at its private meeting, a letter from one of its honorary members, the late John Taylor, of Caroline, on the subject of vegetable manures, from which, I am well assured, some valuable information may be gathered. And here I am reminded that some tribute is due to the memory of that great and good man, who not only bore so conspicuous a part in the councils of the nation, but was equally distinguished for his literary and scientific attainments; for his unwearied and successful devotion to agriculture; for his affectionate and amiable heart, and his gentle and conciliating deportment; and for his rigid adherence to that whole series of duties which attach to the humble relations of private life. He now sleeps in the bosom of the earth, which, while living, he so fondly cherished, and so diligently cultivated. Perhaps no gorgeous monumental pile, or laboured epitaph, denotes to the passing traveller that here is the tomb of moral excellence or of political greatness. Perhaps the clods of his own valley rest unbroken upon his remains, and he boasts no other monument than the simple sod—the *farmer's* sod—placed and nurtured by the pious hand of gratitude and affection upon the humble grave of departed worth. With us, however, as members of the same association, and co-workers with him in the great cause of agricultural improvement, he claims a lasting and grateful remembrance. With his precepts and practice before us, it becomes us to follow, though at humble distance; his illustrious footsteps. We should learn from his example, that the pursuits of science, and even the ignoble employments of husbandry, are not wholly irreconcileable with devoted patriotism and public usefulness—that these modern days, with all their reprobacy, are not too degenerate to produce another and another Cincinnatus, who, like him of old, would desert the plough for the senate, and, the emergency over, descend again to the drudgery of the field. Let us contemplate this admirable model—meditate upon its many excellencies—and earnestly resolve to "go and do likewise."

CULTURE OF COTTON.

J. S. Skinner, Esq. *Washita. 20th May,* 1825.

Sir,— I have seen in one of your papers, an article on the culture of cotton, which is a very valuable one. The only objection which might be made to it, is, the writer's advice not to accelerate the growth of the plant by too much culture. It might have been very correct to have suggested it as a probable method to prevent the *rot,* in the country where the gentleman resides; but I do not think it would be prudent to adopt it here. I have uniformly observed that the best cultivated fields, *cæteris paribus,* produced the most cotton. I never could see that the most luxuriant growth produced the most rot. I could rather assert the contrary, having generally observed most of that disease in the same field, in spots of poorer land occasionally intervening in the richest soil. In the new grounds, where vegetation is extremely strong, the cotton rots less than in lands cultivated many years since. We never manure our fields here. The soil, after having been cultivated for a long space of time, some for forty years, still produces very good crops. The owners of cotton gins, however, generally spread about one inch thick of cotton seed on the poorest parts of their farm; and it proves a most excellent manure. When made use of fresh, its effects are sensibly felt for five or six years. If employed after it has rotted in heaps, its duration does not exceed four years; but it is always better to plant corn or other grain for the first crop in the field thus manured—for experience has taught that cotton planted the same year is harder to gather; it adheres much more to the *bole capsula,* and the gatherers cannot pick as much. The second year that effect is less; it is null the third.

As to the distance of planting, I have no doubt but the one prescribed by the writer, is the best for the soil he cultivates, and the climate which sheds its influence on his crop—but in this country, where vegetation stalks on with gigantic strides, and a luxuriancy hardly equalled any where, cotton is planted much farther apart. I have some in a piece of new ground, (which, however, had before this produced four crops of corn,) planted on the 21st of April last, at a distance of more than 7 feet—and I think I should have done much better to have sown it at 8 feet between the rows, leaving a space of at least two feet between each stock in the row. It will certainly interlock more than I should wish. I am convinced that a different mode of culture ought to be adopted in different soils and different climates.

As to the best mode of packing the cotton, as the writer expresses a wish to know the most expeditious and cheapest method to put it in square bags—I can only say, that in the one generally made use of here, the pressure of the cotton is performed with two wooden screws, 11 inches to one foot diameter, probably in a manner similar to the one alluded to by that gentleman. With a cotton press of that description, four good hands will make 7 or 8 bales a day. I have known them to go even as far as 10—each bale averaging 400 lbs., measuring four feet in length, 20 to 22 inches wide, and two feet high. When taken from under the pressure, they will naturally swell to a size a little larger.—The construction of those machines is simple, and I do not believe that a description of their different parts, and the manner of putting them in operation, (being probably known to the writer,) would be of any utility.

A Washita Farmer.

MILLET.

Sir, *Charleston, S. C., 13th June,* 1825.

In that very interesting communication on the principal gramina, useful, or likely to be useful in husbandry—by the late Mr. Girardin, I observe that he speaks of several species of millet or holcus—viz: holcus spicatus, or Egyptian millet; holcus sucyhom, or French millet. Among these, it appears, that there are several varieties; one particularly (the variety gamma of the holcus spicatus,) which must be of importance to us in this southern section of the Union, as I presume that from the similarity of our climate to that of Egypt, it would thrive here. When practical men communicate the results of their experiments, they are apt to use the common name without adverting to the botanical names of plants. This frequently breeds confusion, and in no instance more, perhaps, than in the case of millet. As it appears to have excited considerable attention at the north, it is much to be desired that some of your useful correspondents would point out which species is most preferred, and what varieties of such species. I should wish to know whether the variety gamma, already referred to, is to be met with in this country. Perhaps that enlightened agriculturist, Col. J. H. Powel, could give the desired information.

Your obedient serv't,
A Constant Reader.

AGRICULTURAL PROSPECTS.

Dear Sir, *Milledgeville, Geo., June* 10, 1825.

Our prospects for crops are only tolerable—corn looks well, but the cotton is unusually small and irregular; from the great quantity planted, however, there must be a considerable quantity made—perhaps 150 to 200,000 bags.

Our crops of wheat have been injured by the rust, and some by the fly.

BOTANY.

PINNOCK'S CATECHISM OF BOTANY.

(*Continued from page* 111.)

CHAPTER VI.

Of the Orders of Plants.

Q. On what are the *Orders* founded?

A. The formation of the orders is as ingenious and simple as that of the classes. In the first thirteen classes, the orders are founded wholly on the number of the pistils; so that by adding *gynia* instead of *andria,* to the Greek words signifying the numbers, they will be easily recollected. Where they are not distinguished by the number of the pistils, their names are taken from some circumstances relative to the stamens, pistils, or seed.

Q Name the first thirteen orders.

A. Monogynia,	1 pistil.
Digynia,	2 pistils.
Trigynia,	3 pistils.
Tetragynia,	4 pistils.
Pentagynia,	5 pistils.
Hexagynia,	6 pistils.
Heptagynia,	7 pistils.
Octagynia,	8 pistils.
Enneagynia,	9 pistils.
Decagynia,	10 pistils.
Dodecagynia,	12 pistils.
Polygynia,	many pistils.

Q. How many orders are there of the fourteenth class (Didynamia.) and how are they known?

A. In the fourteenth class there are only two orders, which depend on the presence or absence of the pericarp or seed-vessel.

1. *Gymnospermia.* Naked seeds in the bottom of the calyx: as in mint, dead nettle, and thyme.
2. *Angiospermia.* Seeds enclosed in a pericarp: as in fox-glove, eye-bright, wood-flax, and fig-wort.

Q. What orders are there of the fifteenth class?

A. Two; which are taken from a difference in the form of the pericarp.

1. *Siliculosa.* Seeds enclosed in a silicle, or roundish seed-vessel, consisting of two pieces called valves, and the seeds fixed to both edges, or satures, as in shepherd's purse and cress.
2. *Siliquosa.* Seeds enclosed in a silique, or long seed-vessel; as in mustard.

Q. How are the orders of the next four classes known?

A. In the classes *Monadelphia, Diadelphia, Polyadelphia,* and *Gynandria,* the orders are distinguished by the number of stamens, viz. *Pentandria,* five stamens; *Hexandria,* six stamens, &c.

Q. How many orders are there in the nineteenth class (Syngenesia?)

A. There are six orders in the nineteenth class, which are taken from the structure of the flower.

Q. Which is the first?

A. Polygamia Æqualis; having both stamens and pistils in the same floret; as in dandelion, thistle, &c.

Q. Which is the second?

A. Polygamia Superflua; when the flower is composed of two parts—a disk, or central part, and rays or petals projecting outwards; as in the sunflower, tansy, daisy, camomile, &c.

Q. Which the third?

A. Polygamia Frustranea; the florets of the centre perfect or united; those of the margin without either stamens or pistils; as blue-bottles.

Q. The fourth?

A. Polygamia Necessaria; where the florets in the disk, though apparently perfect, are not really so, and therefore produce no perfect seed; but the fertility of the *pistilliferous floscules* in the ray compensate for the deficiency of those in the centre of the flower; as in the marygold.

Q. The fifth?

A. Polygamia Segregata; when each of the florets has a calyx, besides the common or general calyx of the flower.

Q. Which is the sixth?

A. Monogamia; when the flower is not compound, but single, and the anther united.

Q. From what are the orders formed in the next three classes?

A. In the classes *Gynandria, Monœcia,* and *Diœcia,* the orders are formed from the number, and other peculiarities of the stamens:

Monandria,	1 stamen
Diandria, &c.	2 stamens, &c.
Polandria,	7 stamens.
Monadelphia,	stamens united into one set.
Polyadelphia,	stamens united into different sets.
Gynandria,	stamens upon the pistil.

Q. How many orders are comprised in the twenty-third class?

A. The twenty-third class (Polygamia) comprises three orders, namely, *Monœcia, Diœcia,* and *Triœcia.*

Q. How many orders has the last class (Cryptogamia?)

A. Four; ferns, mosses, sea-weeds, and funguses.

CHAPTER VII.

Class I.—*Monandria.* (One Stamen.)

THIS CLASS HAS TWO ORDERS.

Q. What examples can you furnish me with, of the class Monandria?

A. Most of the plants belonging to this class are natives of India, such as ginger, cardamons, arrow-root, and turmeric; but we have the *hippuris*, or mare's tail, which grows in our muddy pools and ditches, and, as it is easily procured, will serve for an example, of *order* 1.

Q. Describe it.

A. The *hippuris*, or mare's tail, has neither calyx nor corolla. A single pistil denotes its order, and it has only one stamen, which grows upon the receptacle, terminated by an anther slightly divided, behind which is the pistil, with an awl-shaped stigma, tapering to a point. The stem is straight and jointed, and the leaves grow round the joints; at the base of each leaf is a flower, and it is seen in bloom in the month of May.

> "No velvet mantle, no embroider'd veil,
> Shields poor *hippuris* from the northern gale;
> 'Midst the damp meadow, or the oozy bed,
> In lowly modesty she rears her head."

Q. Describe some plant of this class belonging to *order* 2.

A. The water star-wort (containing two pistils) which takes its name from its upper leaves, making a star-shaped appearance, is to be met with in ditches and standing water, and may be seen in blossom at any time between April and October.

CHAPTER VIII.

Class II.—*Diandria.* (Two Stamens.)

THREE ORDERS.

Q. With what examples can you furnish me in class Diandria?

A. The privet (*ligustrum*) being a shrub very common in our hedges and gardens, will serve to exemplify this class.

Q. Give me an account of it.

A. The privet bears a white blossom, and generally flowers in June. It has a very small tubulated calyx of one leaf, its rim divided into four parts. The blossom is also of one petal, and funnel-shaped, with an expanded border, cut into four egg-shaped segments.

Q. How is it known to belong to this class?

A. By its having two stamens, which are placed opposite to each other, and nearly as long as the blossom. The seed bud is roundish, the pistil or style short, terminated by a thick, blunt, cloven stigma. The leaves grow in pairs, and are sometimes variegated with white or yellow stripes.

Q. Does not the privet bear berries?

A. Yes; the seed vessel is a black berry, containing but one cell, which encloses four seeds. These berries are useful to the dyers, as they give a durable green colour to silk or wool, by the addition of alum.

Q. Does not the common jasmine (*jasminum officinale*) belong to class Diandria?

A. Yes; and as it is a most fragrant ornamental shrub which we are well acquainted with, I will, if you please, describe it.

Q. Do so.

A. The common jasmine is a native of India, but has long been cultivated in Europe. It is chiefly raised against walls, and it is interesting, not only from the elegance of its foliage, but also from the number of beautiful white flowers with which it is adorned, which exhale a sweet odour, particularly after rain, and in the night.

> "With fragrant scent in artless beauty's case,
> In snowy folds that kiss the summer's breeze,
> Attractive fair, the lovely *jasmine* see
> Bow her fine head, and bend her supple knee;
> With piteous air she lifts th' imploring eye,
> Pleads her sad tale, and heaves the tender sigh"

Q. What useful foreign spice belongs to this class?

A. Pepper; there are upwards of sixty different species of pepper, and they are nearly all natives of the East and West Indies. Black pepper (which belongs to the third order of this class) is a shrubby plant, and grows spontaneously in the East Indies and in Cochin China. It is also cultivated at many other places, but in no part of Europe.

Q. Is not white pepper a different species from the black?

A. No: it was formerly thought so, but it is really nothing more than the ripe berries deprived of their skin by steeping them for a time in water, and then drying them in the sun.

Q. Is Cayenne pepper produced from the same plant?

A. No; Cayenne pepper is produced in the West Indies, from a plant called *Capsicum Minimum.*

CHAPTER IX.

Class III.—*Triandria* (Three Stamens.)

THREE ORDERS.

Q. How do you mean to illustrate the class Triandria?

A. By giving you an account of some of the various *grasses*, which are comprised in it. Though it may appear surprising, it is no less true, that every single blade of these apparently insignificant plants bears a distinct flower, perfect in all its parts; and only requires to be nicely viewed, to excite our value and admiration.

Q. Are there not many varieties of grasses?

A. Yes; there are upwards of three hundred species. The general character of grasses may be thus described: the leaves furnish pasturage for cattle; the smaller seeds are food for birds, and the larger for man; but some are preferred to others: as fescue, for sheep; meadow-grass, for cows; canary, for small birds; oats and beans, for horses; rye, wheat, and barley, for man.

Q. Do they not furnish us with many valuable necessaries?

Q. Yes; our most important articles of food and clothing are derived from them. Bread, meat, beer, milk, butter, cheese, leather, and wool; and all the advantages produced from the use of cattle would be lost without them.

Q. How may corn and grasses be distinguished from other plants?

A. By their simple, straight, unbranched stalk, hollow and jointed, commonly called a straw, with long, narrow, tapering leaves, placed at each knob or joint of the stalk, and sheathing or enclosing it, as by way of support: their ears or heads consist of a husk, generally composed of two valves, which form the calyx; within which is the blossom, being also a husk of two valves.

Q. How are the various grasses divided?

A. Linnæus has arranged them into four divisions; the first three include those that are produced in panicles, or loose branches, which are distinguished by the number of flowers in each empalement; the first having one flower; the second, two; and the third, several. The fourth division consists of all those that grow in spikes or heads, such as wheat, rye, barley, &c.

Q. Describe wheat.

A. Wheat, the chief support of man, is cultivated in most civilized countries of the world, and is supposed to have been originally introduced into Europe from Asia.* There is no grain so valuable as this; and it is wisely ordained by Providence, that it is capable of sustaining the severity of northern climates, and the excessive heat of the torrid zone.

Q. Does it not constitute the principal food for all classes of the community in Britain?

A. Yes; and its abundance or scarcity regulates in a great degree the welfare and prosperity of the inhabitants. The whole annual consumption of grain in this island is said to amount to twenty-five million of quarters: and, in London alone, to more than 1,162,100 quarters, of which by far the greatest proportion is wheat.

Q. Is not sugar the produce of a plant belonging to this class?

A. Yes; the sugar-cane, (*saecharum officinarum*) a plant much cultivated in the East and West Indies, which has a jointed stem eight or nine feet high, long and flat leaves of a greenish yellow colour, and flowers in bunches.

Q. What methods are used to extract the sugar from the canes?

A. When cut down, the leaves are thrown away, and the stems or canes are divided into pieces, each about a yard in length: they are then tied up in bundles, and conveyed to the mill, where they are bruised between three upright wooden rollers covered with iron. The *saccharine* juice which flows from them is conducted into a large vessel, and the quantity of juice prepared by some of these mills is upwards of ten thousand gallons in a day.

Q. What processes does it afterwards undergo?

A. The juice is boiled in large caldrons, and afterwards carefully drawn off, leaving the scum at the bottom of the pan. After being again boiled, with a certain mixture of lime, the juice is transferred into a large shallow wooden vessel, where, as it cools, it runs into a sort of *crystallization*, by which it is separated from the *molasses* or *treacle*, an impure part of the juice, incapable of being crystallized, but which is used for various useful purposes.

Q. Does not the celebrated plant called by the ancients *papyrus*, belong to this class?

A. Yes; the plant papyrus* is of the rush kind, and grows on the borders of the Nile, to the height of ten or twelve feet. The stem is naked, having a bushy head, and a few short leaves at the bottom.

Q. What part of this plant was converted into paper?

A. The inner rind of the stem. It was principally manufactured at Alexandria, and the city derived great riches from its exportation. This kind of paper was used in the days of Alexander the Great, and continued in use till about the tenth century, when paper made of cotton was introduced; and such as we now use, made from linen, became common in the fourteenth century.

CHAPTER X.

Class IV.—*Tetandria.* (Four Stamens.)

THREE ORDERS.

Q. How are the flowers of the class Tetandria characterized?

A. They are characterized by having four stamens.

Q. Give me some examples.

A. Teasel, madder, ladies' bedstraw, and holly.

Q. What is teasel?

A. Teasel (*Dipsacus fullonum*) is a plant cultivated in several parts of England, and used in the carding of woollen cloths. It is distinguished from other plants of the same tribe, by having its leaves connected at the base; the flower scales hooked; and the general calyx reflected or bent back.

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* In Egypt corn grows spontaneously: Osiris, son of Jupiter and Niobe, and king of Egypt, is regarded as the inventor of the art of agriculture, and his wife Isis as the discoverer of the use of wheat and barley.

> "Then the far country waves with golden corn;
> The soil untill'd a ready harvest yields,
> With wheat and barley wave the golden fields."
> Homer's Odyssey.

Sac'charine, *a.* sweet, having the taste of sugar.
Crystalliza'tion, *s.* the process of congealing

* From this word *Papyrus*, *paper* is derived; and from the ancient custom of writing on the *leaves* of trees, books are said to be composed of leaves. The word *liber* signifies the inner bark of a tree, on which the ancients wrote; and *volumen* was the manuscript rolled up: thus are our words *library* and *volume* derived.

Q. What is holly?

A. Holly (*Ilex aquifolium*) is a small evergreen tree, with shining irregular leaves, and white flowers, which grow in clusters round the branches, and are succeeded by small red berries.

Q. What is the use of this plant?

A. As a fence, holly is very serviceable, and retains its beautiful green verdure through the severest winters. The *wood* is very close grained, and is used for many purposes. The leaves afford a grateful food to sheep and deer in winter; and the *berries* yield a subsistence to numerous birds. We use branches of holly to decorate our houses and churches at Christmas, to give an air of spring in the depth of winter.

Q. Is not *bird lime* made of the bark of the holly?

A. Yes; and for that purpose it is boiled about twelve hours; and, after standing for a fortnight, is mixed over the fire with a third part of oil. The adhesive quality of bird-lime, thus prepared, is very remarkable, particularly to feathers and other dry substances; for which reason it is used for the smearing of twigs, to ensnare birds.

RURAL ECONOMY.

ON BORING FOR WATER.

New Brunswick, N. J., June 21, 1825.

Dear Sir,

I cannot let Mr. John Trimble's communication pass without commenting on one or two points. He speaks of a log, or "gum," as being necessary to the obtainment of water, or rather for the use of the boring apparatus.

At the well on my farm, a piece of pine scantling 5 inches square and 4 feet long, bored one inch wider in diameter than the chisel, was all that I found necessary. A hole was dug as if for a fence post—into this the bored pine was set; it was well packed around with clay, and it kept its perpendicular position throughout the whole boring. One foot of this pine tube was left above ground. The machinery, which was a moveable frame, was set immediately over this wooden tube, and the chisel that was attached to the boring poles never injured the tube to the last. When the well was thought to be sufficiently deep, the wooden tube was taken out, and a copper tube is now in, to the depth of from 80 to 100 feet. In a former letter, I spoke of wooden tubes of cedar—but we found that they did not suit our purpose. The copper tube is only 1½ inch diameter. The trouble and expense of putting down one of those "gums," must be very great—and in the end they are useless; for the poles and chisel, during the act of boring, have play enough, with an inch in the clear; and when all is done, and the permanent tube is pressed into the well, there is no necessity for so large an opening as that within the gum.

There are several other matters in the letter from Mr. Trimble, that I should like to discuss—but for want of leisure I must let them pass, and only refer to his opinion respecting the probable source of these "central springs." He says, that he "is satisfied that the same laws govern the gravitation of water below as above the earth, and that the jet of a stream depends on the height of its source." I observed to you formerly, that a reservoir on the top of a hill or mountain, was far different from a spring. I never heard of one that was not subject to a slight drought. A filled reservoir, is either the product of several successive showers, or else filled by the constant generation of waters, such as those on the Andes, where it rains perpetually. In colder latitudes, for instance Mont Blanc, there can be no reservoirs—and yet on that very mountain, there is a perpetual spring, one that flows after the manner of other springs. On our Alleghanies, there are many of them, and on the very highest one of all, there is one that has been flowing for upwards of two centuries, undiminished. On Scholey's mountain, there is that famous medicinal spring—it flows unimpaired by droughts. I saw it during the last summer of drought. I inquired, and searched carefully all around, but found no higher reservoir that could supply this flowing spring—and with such constancy and rapidity does it flow, that it has formed a lake about a mile or two below it. A reservoir, to supply such a spring, must have lake Superior tributary to it.

There is no doubt of the fact, that springs are more frequently found on the top and sides of high hills and mountains, than in vallies or plains. We must ask for the cause of this. It will be learned that no reservoirs exist on these hills and mountains, but that the waters are propelled to the surface by some central effort. Gas may be the agent of this central power, for it must be a more permanent thing than what is produced by gas that is extricating itself from beds of mineral. Gas will release itself from confinement as quickly as is possible. It will avail itself of the readiest fissures to get into open space. Mountains, from their structure, present the greatest number of those fissures—and water, that is gravitating, is often intersected by a stream of this gas, which, if of sufficient power, will force up the water with it to the extent of its strength. In boring, we must often intersect a stream of this kind, running perhaps horizontally—into the hole thus bored the gas and water rushes, and reaches the top; and, perhaps, if a tube be put down several feet, well wedged, having a few feet left above the surface, the water may reach the top of the tube. I have several such instances on record, as well as some furnished by yourself. The water that is thus propelled above the surface, may come from a river or brook even lower than the surface of the ground whence it is brought by boring. Whence come the burning springs, and the warm springs, that are found on the tops of mountains. To suppose that all springs must come from a higher source, (I mean, to confine myself to those obtained by boring, and those on the tops of the highest mountain,) one must infer that there is a reservoir on the top of one of the very highest mountains in the world, where water is forever generating, and where it never freezes; and that there must be a communication from this highest mountain to all the others—and this is straining a hypothesis too far. It is much more natural and philosophical, to imagine, that the earth is intersected by streams of gas, and that the waters of saturation are propelled from their gravitating principle by these streams of gas; and that the greater the depth from which these gases are sent, and the fuller the source of the waters that are propelled upwards again—the higher these waters will be ejected, and the more constant will they flow.

The attention of the learned in hydrostatics and hydraulics, will soon be drawn to this interesting subject; and you will have the pleasure of being the first to introduce the new principle to the world. It will be found, that "water may be obtained on those small flat bodies of land that are surrounded by the sea, which (according to Mr. Trimble's opinion,) are not likely to afford fresh water at any convenient depth." C.

COTTON PRESS AND CAYENNE PEPPER.

Dear Sir, *Maury county, Ten., June* 9, 1825.

The cotton press described by Mr. Fields, would probably be more economical than the wooden screw now in general use, from its greater durability, and the ease with which a broken link might be repaired. I think, however, that the bales would spring in the direction that they were pressed, and make unhandsome ends, which would be very objectionable.

I have to erect a cotton press the ensuing fall, and shall try, in place of the screw, two strong swords with cogs on the edge, to be run up and down by means of a trundle-head for each sword, on a shaft having a tread-wheel on each end of it. If it succeeds well, you shall have a more particular description of it.

I also send you a few seed of the Cayenne pepper—which, with some difficulty, has been naturalized to this climate, and probably will succeed with you. It is called in Louisiana, the bird pepper, and is infinitely more pungent than any of its kindred. The lady who furnished the seed, sends a small sample of the pepper, prepared for the table; and as her manner of doing it is much superior to the process one of your correspondents furnished some time ago, it may not be amiss to give it. Put the pods into a coarse paper bag, and hang it on the breast of the kitchen chimney until perfectly dry. They will then be easily reduced to the necessary fineness in a covered iron mortar, and the beautiful red colour and genuine flavour be perfectly preserved. If you fear the seed will not vegetate, since they were gathered last fall and the second season will arrive before they can be planted, you can obtain more in due time, if you desire them. Yours, &c.

E. M. FORD.

P. S. We have had an unusually dry spring, and at present are suffering from drought.

RECIPES.

TO CURE THE COLIC IN HORSES.

Dear Sir, *Tranquility, June* 25, 1825.

I observed, in looking over one of your papers of April last, salts recommended as an infallible cure for the colic in horses. Although I have sometimes found it efficacious in cases of colic, I have known it to fail frequently in producing a cure. My object in sending you the present communication, is to give you a remedy for this disease, which I have found much more certain than salts administered in *any quantity.* This remedy is linseed oil, administered in the quantity of from half a pint to a pint, in proportion to the violence of the symptoms. This medicine, as far as I have observed, and as far as I have heard from others, has never failed producing almost instantaneous relief to the animal, under even the most violent fits of that disease. I will give you an instance which came under my observation last summer: a near neighbour of mine sent to me to prescribe for a horse labouring under a fit of the colic, from eating too much green food after working in very hot weather; I immediately endeavoured to procure a dose of linseed oil at every house in the neighbourhood, without success—in the mean time I administered almost every remedy which I could think of; among the rest, one pound of salts. The disease baffled all my exertions and the animal died in the course of the night. A few days afterwards I was sent for to see a horse belonging to the same neighbour, who I think had a more violent attack than the former; having a bottle of linseed oil by me at the time, I gave him three gills immediately, and in fifteen minutes he was perfectly relieved and began to graze. The physicians in this section of the country are in the habit of giving this medicine to their patients, for obstinate fits of colic, in doses of a large table spoonful to a strong healthy adult, and diminishing the quantity according to the size and age of the patient.

You will very much oblige me, as well as many others, if you can publish in the Farmer a recipe for destroying and keeping the web-worm from bee hives. I am losing a fine parcel of hives by their inroads, and know of no preventive.

I am, sir, respectfully, A SUBSCRIBER.

ESSENCE OF SOAP FOR SHAVING, OR WASHING HANDS.

Take a pound and an half of fine white soap, in thin slices, and add thereto two ounces of salt of tartar; mix them together, and put this mixture into one quart of spirits of wine, in a bottle which will hold double the quantity of the ingredients; tie a bladder over the mouth of the bottle, and prick a pin through the bladder; set it to digest in a gentle heat, and shake the contents from time to time, taking care to take out the pin at such times, to allow passage for the air from within; when the soap is dissolved, filter the liquor through paper to free it from impurities; then scent it with a little bergamot, or essence of lemon. It will have the appearance of fine oil, and a small quantity will lather with water, like soap, and is much superior in use, for washing or shaving.

PASTE, OR FOOD FOR SINGING BIRDS, SUPERIOR TO THE GERMAN PASTE IN COMMON USE.

Well mix, or knead together, three pounds of split p[illegible]; grind or beat to flour one pound and a half each of fine crumbs of bread and coarse sugar—the fresh yolks of six raw eggs, and six ounces of unsalted butter; put about a third part of the mixture at a time in a frying pan, over a gentle fire, and continually stir it, till it be a little brown, but by no means burnt; when the other two parts are thus done, and all are become cold, add to the entire quantity six ounces of mow seed, with six pounds of good bruised hemp seed, separated from the husks; mix the whole well together, and it will be found an excellent food for thrushes, red robins, larks, linnets, canary birds, finches of the different kinds, and most other singing birds, admirably preserving them in song and feather.

DOCTOR ANDERSON'S MODE OF KEEPING MILK AND BUTTER.

The pernicious method of keeping milk in leaden vessels, and salting butter in stone jars, begins to gain ground in this country, as well as elsewhere, from an idea of cleanliness. The fact is, it is just the reverse of cleanliness; for, in the hands of a careful person, nothing can be more cleanly than wooden dishes; but, under the management of a slattern, they discover the secret when stone dishes do not. In return, these latter communicate to the butter and the milk which has been kept in them a poisonous quality, which inevitably proves destructive to the human constitution. To the prevalence of this practice. I have no doubt, (says the Doctor,) we must attribute the frequencies of palsies, which begin to prevail so much in this kingdom; for the well known effect of the poison of lead is debility, palsy,—death!

TO MAKE SALT BUTTER FRESH.

Put four pounds of salt butter into a churn with four quarts of new milk, and a small portion of arnotts. Churn them together, and in about an hour take out the butter, and treat it exactly as fresh butter, by washing it in water and adding the customary quantity of salt. This is a singular experiment. The butter gains about three ounces in each pound, and is in every respect equal to fresh butter. It would be greatly improved by the addition of two or three ounces of fine sugar, in powder. A common earthen churn answers the same purpose as a wooden one, and may be purchased at any pot shop.

CREAM PRESERVED ON LONG VOYAGES.

Mix with a quantity of fresh rice, cream, half its weight of white sugar in powder; stir the whole well together, and preserve it in bottles well corked. In this state it is ready to mix with tea or coffee.

THE FARMER.

BALTIMORE, FRIDAY, JULY 1, 1825.

For any delay or deficiency in answering the favours of correspondents, during the last three weeks, the Editor begs to explain—That under an invitation with which he was honoured by the War Department, he repaired to West Point, to attend, as one of the board of visiters, the examination of the Cadets at the "Military Academy." The examinations were commenced on the first Monday of June, and were continued, without intermission, until Thursday afternoon of the 23d—commencing, during a good part of the time, at 5 A. M. and lasting until 7 P. M. They were very thorough, and in all respects calculated to do honour to the Cadets and their Instructors. An idea probably prevails, that this institution, as its title imports, is exclusively of a *military* character; and that the studies pursued in it are only such as belong strictly to the profession of *arms;* but this impression is far from being correct. From notes taken on the spot, we shall shew in subsequent papers, as we find room, the course and the nature of the instructions given; and an abstract of some of the examinations which passed in our presence, will prove to the community, by whom this great national institution is supported, that it prepares those who are instructed in it, to play, with eminent intelligence and effect, an active part on the great theatre of *practical civil life.* For further remarks on the character of the institution, we have no leisure, nor room, at present; but the views that will be hereafter presented, will be such as associate well with the agricultural interests of the country, and will, therefore, we hope, be received by our readers as not incompatible with the main purposes of this journal.

The visit to West Point was one of great pleasure and high intellectual interest. The only drawback on the satisfaction it yielded, arose from the consideration that it involved a temporary absence from our official post; where it is our constant desire to afford, even to the most idle and envious, not the slightest ground for complaint. But precautions were taken, that the Post Office should not be *one moment*, day or night, without a competent person to give *prompt and polite* attention to every demand; and we fearlessly challenge the specification of failure to accomplish that, in a single instance. The illustrations we shall give of the examinations of the Cadets, in regard to the materials and structure of *roads* alone, will, we trust, show to the Postmaster General, who knows how to mingle with strictness of discipline, liberal indulgence to those under his control, that our time was not past disparagingly to *his department*—to which properly belongs, if to any, the constitutional power to *make*, as well as to "establish" national "post roads."

TOBACCO.—Eleven hogsheads Tobacco, made by James Osborn, of Anne Arundel county, sold for $6 per hundred for the second, and $12 per hundred for the crop. Three hhds. Ohio Tobacco sold for $17 per hundred round. All kinds of tobacco maintain their prices. Inspections for the last week in the three state warehouses, 498 hhds.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	7	9	10	
COFFEE, W.I. Green, .	—	16½	17	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	29		
Georgia Upland, . . .	—	22	26		
COTTON YARN, No. 10,	—	45			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11	11	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	35	38		
FISH, Herrings, Sus.	bbl.	2 18		2 25	
Shad, trimmed,	—	6	6 50	7 00	
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 50			
Fine, ...	—	4 25			
Susquehanna, superfi.	—	4 38			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	43	48		
Wheat, White, ...	—	95	1 00		
do. Red, ...	—	85	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, ...	—	3	3 25	3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—		22	25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	215			
HOGS' LARD, ...	lb.	6	9		dull
LEATHER, Soal, best,	—	24	27		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	27	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 62		1 75	
Pitch, ...	—	1 50	1 75		
Turpentine, Soft, . .	—	2 62			
OIL, Whale, common, .	gal.	25	27		
Linseed, ...	—	65			
PORK, Baltimore Mess,	bbl	14	15		
do. Prime, . . .	—	10 50	11		
PLASTER, cargo price,	ton.	6 75			
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 50	4		
SOAP, Baltimore White,	lb.	14		18	
do. Brown, .	—	6	8	8	10
WHISKEY, 1st proof, .	gal.	23	23½	37	75
PEACH BRANDY, 4th pr	—	65	82	1	1 25
APPLE BRANDY, 1st pr	—	28	30		37
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	10 25			
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	1 10		1 25	
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	3 00		3 50	
Nutmegs, ...	—	2 50		3 00	
Pepper, ...	—	20		25	
SALT, St. Ubes, ...	bush	44			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	3 25	3 00	4 00
do. Sicily, . .	—	1 10	1 15		
Lisbon, ...	—	1 30			
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	2		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	20	30		
Skinners' or Pulled,	—	30	35		

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AGRICULTURE.

CHAMPION'S CATTLE SALE IN ENGLAND.

Blyth, near Bawtry, 25th April, 1825.

My Dear Sir,

I have now much pleasure in sending you a catalogue of my sale, with the names of the purchasers and prices. The company was highly respectable and most numerous—more than 400 were present. Mr. Fortescue and Mr. Norman were from Ireland; they bought nine lots of females. Mr. Fortescue is the gentleman to whom I sold Brigade Major, about two years ago, for 150 guineas. About a week before my sale, Mr. Fortescue gained three premiums for bulls, at the agricultural meeting held in Dublin. My cows and heifers sold at a great price, considering that many of them were not of my best blood, and several of them had been so recently bulled as not to be considered safe in calf. You will find, by reference to the catalogue, the best bred ones do not always command the best prices. For instance, lot 14 sold for 46*l.* without any pedigree—and lot 11, with a very good pedigree, sold only for 23*l.*, being just half the price. This proves, unless a person has good judgment in selecting the animals he wants to breed from, that he may very soon get wrong if he attends to pedigree only—but when it is combined with good shapes and superior qualities, it makes the animal of much greater value. My bulls did not sell well, in proportion to my cows—but, with the exception of Symmetry and Quality, the others were not superior. Old Don Cossack had been an excellent stock getter, but at his age I could not expect a greater price—and Quality, I have no doubt, would have sold for double the price, had he not unfortunately got lamed. I have some promising young bulls coming forward—one, own brother to Symmetry, very good, and he is a dark red and white. With every good wish and kind regard, I subscribe, my dear sir, your faithful friend,

CHAS. CHAMPION.

J. S. Skinner, Esq.

EIGHTH ANNUAL SALE

Of Improved Short Horned Stock, the property of Mr. Champion, of Blyth, Nottinghamshire, on Thursday, 7th April, 1825.

Lot 1—*Speckle*, roan and white, two years old, by Speculation,[*] (see Coates' Herd Book Appendix, p. 584,) her dam No. 14, grandam a great milker, and the dam of the yearling heifer shown at Sir C. Morgan's cattle show, in Wales, in December 1823; bulled on the 12th October, 1824, by Quality—sold for 35*l.* to Mr. Durham.

Lot 2—*Dapple*, red and white, two years old, by Blaize,[†] (No. 76 in Herd Book,) her dam was bred by Mr. Smith, of Togston, an eminent breeder, near Alnwick, in Northumberland; bulled on the 29th Nov. 1824, by Speculation—27*l.* Mr. Fortescue.

Lot 3—*Miranda*, roan and white, two years old, by Blaize, her dam Mira, by Mr. Mason's Charles[‡] (127,) grandam, Mr. Arbuthnot's Maria, (bred by Mr. R. Colling,) by George, great grandam by Midas, great great grandam by Punch; bulled on the 18th December, 1824, by Speculation—75*l.*, Mr. Slater.

Lot 4—*Strawberry*, speckled red and white, two years old, by Conqueror, a son of Warrior,[*] her dam a well bred cow, purchased of Mr. R. Colling's herdsman; bulled on the 10th Oct., 1824, by Symmetry—33*l.*, Mr. Dolley.

Lot 5—*Laura*, dark red and white star, two years old, by Blaize, her dam Louisa, by Mr. Mason's Charles, grandam Lily, by Mr. R. Colling's son of Favourite, great grandam by the same bull, great great grandam by Mr. Chapman's bull, of Dimsdale, great great great grandam by Mr. R. Grimston's bull; bulled on the 9th December, 1824, by Speculation—45*l.*, Mr. Fortescue.

Lot 6—*Meadow Maid*, dark roan, two years old, by a son of Warrior, sold to America, and there named Champion, (see Herd Book Appendix, page 530,) her dam by a son of Crispin; bulled on the 11th November, 1824, by Speculation—40*l.*, Mr. Dolley.

Lot 7—*Peach*, roan and white, two years old, by Plastic, a well-bred son of Warrior, her dam was twin sister to lot 18, and by Doctor Syntax, (Herd Book, p. 582,) grandam bred by the late Mr. Hall, of Lingodell; bulled on the 12th Jan. 1825, by Speculation—54*l.*, Mr. Slater.

Lot 8—*Innocence*, white, three years old, by Warrior, her dam by Mr. Mason's Charles, grandam by Mr. C. Colling's Comet, great grandam by Mr. R. Colling's son of Favourite, great great grandam by the same bull, great great great grandam by Mr. Chapman's bull, of Dimsdale, great great great great grandam by Mr. R. Grimston's bull; bulled on the 13th Jan., 1825, by Challenger—57*l.*, Mr. Durham.

Lot 9—*Ruby*, dark red with white spots, three years old, by Warrior, dam Primrose, (Herd Book, 509,) by Mr. Mason's Charles, grandam by Blyth Comet, great grandam by Prince, great great grandam by Mr. George Coates' Patriot; bulled on the 20th March, 1825, by Quality—52*l.* 10*s.*, Mr. Norman.

Lot 10—*Columbine*, dark red and white, three years old, by Warrior, her dam Kate, by Mr. Jobling's Wellington, (683,) now Mr. Wetherell's Rockingham, grandam Cathlene, (bred by Mr. Colling, and sold at his sale for 160 guineas,) by Washington, and she was bred from the daughter of the dam of Phœnix; bulled on the 20th Nov., 1824, by Speculation—70*l.*, Mr. Slater.

Lot 11—*Ariel*, yellow and white, three years old, by Mr. T Bate's Ketton 3d, (No. 349,) dam Marigold, (bred by Mr. Gibson,) by Mr. Colling's Midas, grandam by Harlequin, (No. 289,) great grandam bred by Mr. Gibson; bulled on the 15th Feb., 1825, by Speculation—23*l.*, Mr. J. Wright.

Lot 12—*Dainty*, light red, three years old, by a son of Mr. Anthony Wailes' Duke, dam Dairy Maid, by Leopold, (No. 370,) grandam by Sir Harry, a son of Mr. R. Colling's Phenomenon, great grandam by Mr. Anthony Wailes' Duke of Wellington, (No. 231,) great great grandam by Surly; bulled on the 16th Nov., 1824, by Speculation—50*l.*, Mr. Fortescue.

Lot 13—*Henrietta*, dark red, three years old, by Harold, (No. 291,) dam by Mr. Mason's Charles, grandam by Mr. C. Colling's Windsor; bulled on the 17th March, 1825, by Speculation—40*l.* Mr. Fortescue.

Lot 14—*Susan*, spotted red and white, four years old, pedigree unknown. This cow is the dam of lot 1, and also of a heifer calf, which was shown at the sale; bulled on the 24th March, 1825, by Speculation and Favourite—46*l.*, Mr. Durham.

Lot 15—*Cinnamon*, dark red, nine years old, by Prince, dam Chestnut, lot 1 in sale 1819, by Blyth Comet, grandam Cherry, by the late Mr. Foljambe's bull, bred from his favourite cow Cherry, great grandam Old Chance; bulled on the 28th February, 1825, by Speculation—30*l.*, Mr. Norman.

Lot 16—*Wildair*, dark red and white spots, seven years old, exact pedigree unknown—bred by Mr. Smith, of Togston, an eminent breeder, near Alnwick, in Northumberland; bulled on the 27th Aug., 1824, by Aid-de-camp—35*l.*, Mr. Fortescue.

Lot 17—*Bright Eyes*, white and red spots, seven years old, by a son of the late Mr. Munday's bull, out of his own dam, which was also the dam of the White Ox, by Prince, shown at Lincoln in 1815, and of the late Mr. Ingall's roan bull, by Blyth Comet; bulled on the 28th Feb., 1825, by Speculation and Challenger—28*l.*, Mr. Rudley.

Lot 18—*Rachel*, dark red and white, seven years old, by Dr. Syntax, a son of Mr. Mason's Charles, from Blyth Comet's dam, Magdalene, her dam bred by the late Mr. Hall, of Lingodell; bulled on the 25th November, 1824, by Speculation—56*l.*, Mr. Bolden.

Lot 19—*Dolly*, white and red spots, nine years old, by Mr. C. Colling's Wellington, dam Daisy; bulled on the 25th Feb., 1825, by Speculation—35*l.* Mr. Fortescue.

Lot 20—*Coates' Tulip*, dark red and white, six years old, by Blyth Comet, dam Tulip, (bred by Mr. George Coates,) by Driffield, grandam Young Hart, by Haughton, great grandam Hart, by a bull of Mr. Cornforth's, of Barforth, near Darlington; bulled on the 22d Feb., 1825, by Speculation—40*l*, Mr. Fortescue.

The 20 cows and heifers sold for 871*l.* 10*s.*—averaging 43*l.* 11*s.* 6*d.*

BULLS, SOLD WITHOUT RESERVE.

Lot 21—*Challenger*, dark red, calved on the 2d of January, 1823; his sire Conqueror, (Herd Book, page 581,) his dam by Prince, grandam by Blyth Comet, great grandam Cherry, by the late Mr. Foljambe's bull, great great grandam Old Chance—53*l.*, Mr. Gibson.

Lot 22—*Symmetry*, white, calved on the 24th of July, 1823; his sire Aid-de-camp,[*] (page 579,) his dam Lavinia, by Mr. Mason's Charles, (page 595,) grandam Latona, by Mr. C. Colling's Comet, great grandam Lily, by Mr. R. Colling's son of Favourite, great great grandam by the same bull, great great great grandam by Mr. Chapman's bull, of Dimsdale, great great great great grandam by Mr. R. Grimston's bull—88*l.*, Mr. Powel.

Lot 23—*Sportsman*, roan and white with red neck, calved on the 12th of April, 1823; his sire Blaize, (No. 76 in Herd Book,) his dam Landlady, by Mr. Joblyn's Wellington, now Mr. Wetherell's Rockingham, and she was bred from Wellington's dam, grandam by Mr. C. Colling's Phenomenon, great grandam by Colonel, great great grandam by a son of Hubback—45*l.*, Mr. Martin.

Lot 24—*Quality*, red with some white spots, calved on the 14th of April, 1823; his sire Aid-de-camp, his dam Moss Rose, by Mr. Mason's Charles, grandam Cora, by Blyth Comet, great grandam Old Chance—45*l.*, Mr. Warriner.

Lot 25—*Don Cossack*, red and some white, eight years old; his sire by Mr. Mason's Charles, his dam

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[*] Speculation, by Warrior, his dam Lavinia, by Mr. Mason's Charles, grandam Latona, by Mr. C. Colling's Comet, &c. same as lot 22.

[†] Blaize, by Blyth Comet, his dam, Mr. Geo. Coates' cow Crimson, by Patriot, grandam by Driffield, great grandam by Mr. Christopher Holmes' bull.

[‡] Charles, (for the use of which bull the late Colonel Mellish and Mr. Champion paid Mr. Mason 450 guineas for two years,) his sire Pope, his dam Cora, by Chilton, his grandam Marcia, (for which cow Mr. Mason refused 700 guineas) by Simon or the White Bull, great grandam Gaudy, by Favourite, great great grandam by Bolingbroke, great great great grandam by Foljambe, great great great great grandam by Hubback.

[*] Warrior, by Mr. R. Colling's Wellington, (the son of Comet, dam Wildair,) dam Young Diana, by George, grandam Diana, by Favourite, great grandam Wildair, by Favourite, great great grandam by Ben, great great great grandam by Hubback, great great great great grandam by the sire of Hubback.

[*] Aid-de-camp, by Warrior, his dam Miss Mason, by Charles, grandam Miss Colling, (who has gained six premiums or sweepstakes,) by Prince, great grandam Magdalene, by Comet, great great grandam by Washington.

Aid-de-camp won 30 guineas sweepstakes and 10 guineas premium, as the best yearling bull shown at the Doncaster Agricultural Meeting in 1821; and also a silver cup, value 30 pounds, as the best bull of any age, given by the Board of Agriculture, at their last show in London, April 1822.

Cherry, sold at sale 1819, by the late Mr. Foljambe's bull, bred from his favourite cow Cherry, grandam Old Chance—41*l.*, Mr. Hartshorn.

Total amount of sales, 1146*l.* 10*s.*

Mr. Champion is quite sure, if he had offered double the number of cows and heifers, they would have been as readily sold.

As a proof of the early maturity and quick return of profit of my breeds, I have sold five fat steers and a heifer, (which were exhibited at my sale,) to Mr. John Hatfield, a respectable butcher of Southwell, at 33*l.* 10*s.* ($148.74,) each. They are computed to weigh 74 stones each, of 14 lbs. (or 1,036 nett weight,) and their average age is only two years and three months. Such a price, and such a weight, at such an early age, speaks more for their superior ripeness and quality, than all I can say: it is what we, in this country, say *proof positive.* My heifer, Miss Points, was universally admired. I have no doubt, had I been inclined to have offered her by auction, she would have sold for considerably more than 100 guineas. I have had a painting of Miss Points, by the best cattle artist we have, a Mr. Weaver; and he has also painted one for Mr. Fortescue, as a specimen of a short horn. Mr. Weaver's charge is twelve pounds. I most sincerely wish you could have been here at my sale; I am sure you would have been most highly gratified, and my pleasure would have been unbounded. Pray, let me hear from you very soon.

Yours, sincerely,

CHAS. CHAMPION.

J. S. Skinner, Esq.

P. S. As our ministers are now adopting the liberal principles of free trade, and have allowed wool to be exported, I should not think it unlikely but some sheep might be permitted to be exported, upon making particular application. I have named this in consequence of your expressing the desire of some gentlemen in America, to have some of my breed of sheep.

DEVON CATTLE AND SAXON SHEEP.

[Mr. Hurlbert resides in what may be called a dairy country, and is well known in the Baltimore market, where he sells, annually, a very large quantity of cheese. He "shears his own fleece, and he wears it," for we have generally seen him clad in homespun broadcloth, of elegant quality, from his own sheep, and spun in his own family. He is what may be emphatically called a well judging practical man; so attentive to his own affairs, and so nice an observer withal, that we should suppose he could give us some particulars, some weights and measurements, illustrative of the quality of his favourites, the Devons; what they have yielded in milk, butter, cheese, beef, &c., and how they have compared at their cattle shows, in the yoke and otherwise, with other breeds. They could not be in better hands than his and Mr. Barney's.]

Winchester, Centre county, Conn.,
27th June, 1825.

J. S. Skinner, Esq.,

We take the liberty to enclose you the impression of a wood cut of our Devon bull, Holkham; it is a tolerable likeness, though not so fine in the head as the original. We purchased Holkham of Mr. Patterson, of your city, in the fall of 1819. He was then seven months old; he is now six years old, and probably weighs 1700 lbs., and his progeny cannot be less than nine hundred. He is doubtless one of the finest animals of the breed, or of any other breed in America. His stock, wherever they are known, are more admired than any other breed of cattle; they seem to be exactly fitted, in all respects, for the pastures of New England. His oldest calves are now four years old, and it is now ascertained that the cows are superior for the quality of their milk, and for the quantity they are as good as any breed of cattle we are acquainted with; and we have never seen any oxen equal them for symmetry of shape, for sprightliness, for docility and tractability in learning to work, and for their ability to endure heat and fatigue. We find this breed to be more hardy and easier kept than any cattle we ever saw; they fatten easy. We have disposed of several hundred of mixed, and a few full bloods, since we have had this bull—have sold all we ever offered for sale, and have disposed of them short of one year old—and the call for them has greatly increased within the last eight months.

Mr. Coke does, indeed, "deserve the everlasting gratitude of the people," not only "of Maryland," but of the United States generally, for the valuable present of this breed of cattle to Messrs. Patterson and Caton, and we can with pleasure anticipate the time when the pastures of New England shall abound with the North Devons. We have already supplied orders for stock from Holkham, from Massachusetts, Vermont, Ohio, South Carolina, and a considerable number for the state of New York. We saw last week, in Albany, the stock of Mr Van Renssalear—his short horns are the best I have ever seen of the breed.

We likewise annex you three samples of Saxon wool, cut from two rams and one ewe, we purchased at the sale in Boston, on the 15th July last. We, in company with Mr. Watson, purchased at that sale seven bucks, seven ewes, and one lamb. The stock quite answers our expectation—the half blood lambs are extremely fine, in regard to size and wool; and we think we shall have no difficulty in obtaining $1 the pound for their wool, next season, washed on the sheep. The price paid for each you have annexed.*

The farmers in Connecticut have generally disposed of their wool; that from the best flocks of Merinos has brought from 67 to 75 cents, washed on the sheep. The sheep fever runs high in this region, and we have no doubt but the Messrs. Searles will realize a fair price for their second importation of Saxon sheep, which are to be sold near Boston on the 14th July.

Yours, respectfully,

SAM'L HURLBERT & CO.

P. S. The samples of wool annexed are only of ten months growth; the sheep from which they were taken were sheared the 5th of last August, and now the 8th of June.

[Farmers or manufacturers can see the samples enclosed in the above letter, by calling at the office of the American Farmer.]

CLIMATE, SOIL, AND AGRICULTURAL PRODUCTIONS OF THE STATE OF ILLINOIS.

Extract from an Address delivered by Governor Coles, at the Agricultural Society of the state of Illinois, held at the State House in the town of Vandalia, on Monday the 13th of December, 1824.

Communicated for publication in the Am. Farmer.

We have already been taught by experience, that every part of Illinois is adapted to the growth of the different kinds of grasses, of Indian corn, wheat, barley, rye, oats, hemp, flax, and tobacco; and, in the more sandy soils, that cotton and rice may be cultivated to advantage. Bene and palma-christi grow well, and it is believed, if judiciously managed, would be profitable crops. Hops are indigenous to the country, and would, if cultivated, give an abundant and certain yield, and be valuable as well for the home as for distant markets. There is no doubt but our climate and soil are adapted to many kinds of vine, from which valuable wines may be made. This is a subject of great interest, and one to which I would particularly call the attention of my brother members. A country capable of affording so great a variety of articles, and distinguished by such peculiarities of situation and surface, seems in an especial manner to invite investigation, and to call for the concentration, by means of a society of this kind, of the knowledge and experience possessed by individuals as to the kind of productions, and the cultivation and rotation of crops which would conduce most to the prosperity and happiness of the community.

In our general management much labour and expense might be saved, and larger and more certain crops obtained, by the introduction of a better system of cultivation. My limited experience will not justify, nor will the occasion authorize, my giving many detailed illustrations of this fact. I will content myself for the present in very briefly noticing a few obvious defects, which may be easily remedied.

We should plough and prepare our lands better previous to the planting of Indian corn, and our crops would be better, with much less after cultivation; especially if the single horse harrow and other species of "cultivators" were to be used, which have lately been advantageously substituted for the plough in many of the corn-growing districts of our country, and which are so peculiarly suited to our level and smooth prairie lands.

Owing to the excessive rains, which usually fall in the spring of the year, it is necessary, where the surface is level, to drain off the superabundant water; and, that previous to the seeding of all kinds of small grain, the land should be ploughed and thrown into beds adapted to the inclination of the surface. These beds, when judiciously formed, will be found of great utility in draining the level lands, and rendering less precarious, and more abundant, every description of crops.

The wheat crop, with us, is worse managed, and, of course, more frequently fails than any other. It is seeded too thin, too late in the season, and on too level a surface, and is suffered to stand too long before it is reaped. The general dryness of the autumns requires more early seeding than is usual with us, to enable the wheat to acquire sufficient strength to withstand the intense cold and sudden changes of our winters. Wheat should not be suffered to stand, as is our general practice, until it becomes hard and dry, but should be cut when the straw is somewhat green, and the grain soft; in this state much is saved by its not shattering, and it has been found to yield, when ground, less bran and more and better flour.

It is believed that few, if any portions of the Union are better adapted to the growth of hemp and flax than Illinois; and there can be but little doubt, if the advantages to be derived from the machinery lately invented for their preparation be equal to what it is represented, that they will soon be cultivated very extensively and to very great profit. And time may show I do not hazard too much in supposing, that the inferiority of our climate for the growth of the high prized cottons is counterbalanced by the superior advantages of our situation for the production of hemp, flax, and wool.

Cotton, however, has been found to grow luxuriantly on our warm and sandy soils, and to be a profitable crop, and better adapted to free labour than has generally been imagined. A considerable quantity, of good quality, is now annually raised, particularly in the Wabash country; and there can be no doubt but it would be highly advantageous to our farmers to turn their attention more to its cultivation. The preparation of the land, and the planting and culture of cotton, are very similar, and but little more troublesome than that of corn; and, as the labour required to rear and gather it is easy, neat, and comfortable, and much can be done by women and children, and, as it is picked by machinery, it is well adapted to the character of our free population; as it is also to our interior situation, from its being compressed into a small compass, and but little liable to injury in reaching a distant market.

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* Ram, No. 2, cost $88;
Ewe, No. 52, " 75;
Ram, No. 53, " 138; bought in company with Mr. Watson, to whom we paid $100 for his half of him.

No country of the same latitude can be better adapted to the rearing of live stock than Illinois. The large prairie meadows abound in the most luxuriant and nutritious herbage, affording a rich pasture for summer, and a plentiful supply of hay for winter. Indeed it is impossible for one who has not seen a similar country, to conceive how a farmer can, where he has never ploughed nor sowed, mow two tons of hay from each acre of the commons. Yet this is the yearly practice in this beautiful and fertile country. A soil so peculiarly adapted to the growth of grass, of course, produces very kindly the domestic species; these, from the superiority of the hay, and the great facility with which artificial meadows are made, will gradually take the place of the wild grasses for this purpose; but the prairies will long afford luxuriant pastures for horses, cattle, sheep, and hogs.

It is very usual to hear farmers complain of the want of a market for their produce. This is certainly often the case, but it is equally certain, that in the course of the year there is always to be found a good market for all the produce which our farmers have to dispose of. Unfortunately for the interest of the country, whenever any produce is fit for market, the whole is brought in at once, and the consequence is that the superabundance of the article reduces its price below its fair value. Instead of pursuing this improvident course, if our farmers would store away carefully their produce, and supply the market from time to time as it was wanted, they would find the price to be such as to make farming much more profitable. In proof of this, it is only necessary to refer to the price of every article of produce, in every neighbourhood, at certain periods of each year. For instance, at St. Louis, it will be found that for about half of each year, flour sells nearly as high as at Baltimore—and that a great proportion of the flour consumed in St. Louis, and nearly all the whiskey, as well in town as in the neighbouring country, and, I may say, throughout this state, is brought from other states. This shows, that these two staple articles sell for a better price here. Nor is it confined to these two articles. Take the year round, and the general produce of every farm sells higher in Missouri and Illinois than in any other part of the western country. Whether this arises from our backwardness in cultivation, or our improvidence in sending too great a proportion of produce to the New Orleans autumn market, it is not for me now to inquire. I have stated the facts for the encouragement of our farmers, and with the hope, that, in future, they will, instead of complaining, endeavour to supply our own home consumption, to the exclusion of distant competitors.

SHEEP—No. 7.

Mr. Editor,

At the sheep shearing of 1812, there were four competitors for the first cup, all of them more or less merino. The premium cup was adjudged to George Mason, Esq., (of Gunston,) Roderic Dhu, half bred—gross weight 129½, fleece unwashed, 9 lbs. 12 oz. The cup for ewes, of forty dollars value, to Lawrence Lewis, Esq., pair of ewes—weighing gross 60 lbs. and 65 lbs., fleeces 4 lbs. 8 oz. and 4 lbs. 1 oz. washed. For the cloth, to Mrs. Sowder, of Virginia.

The meetings had, for several years, been numerously and most respectably attended. Strangers of distinction, legislators, judges, generals, *cum multis aliis*, gave their countenance to an institution, which they were pleased to think might "do the state some service." Most of the guests appeared in some degree in national costume, many in full dress. After the show, a fair was held, and the articles not premiumed, were sold at good prices. We then adjourned to a comfortable dinner, where we got along jollily enough, without getting drunk, for we drank an American wine, not so good as our friend Adlum furnishes now, but palatable enough to the taste and no wise inimical to the brain—and we sang old songs, talked of the times, the war, and our hope that our veteran enemies would be shorn of their pride and honours when they touched upon the last foothold of freedom; and then we buzzed about the bottle, not grey beards with the cobwebs of a quarter century, but the bran new brewings of the currant and cherry, which blushed in the garden but the year before, and from which we drank, with hearts as full as our cups, success to the cause of agriculture and domestic economy—the cause of industry and independence.

Such were the Arlington sheep shearings of *auld lang syne*.

Among the various plans suggested for bettering the condition of our domestic concerns in former times, I took the liberty to suggest the establishment of a *national board of agriculture*. There is something in names, and if this name smacks too much of aristocracy, suppose we say, a *national school of agriculture*, to be established under the immediate auspices of government. We have many boards already—a marine board, a military board for education, and a topographical board, now very properly and profitably employed in works of internal improvement—and why not a board whose labours shall give *speed to the plough*, that virtuous emblem of a nation's greatness? You weave a chaplet of honour, to deck the brow of the victor in arms, and have you no wreath for him, who "better than the philosophers," causes "two spears of grass to grow now where but one grew before?" or does the sun of glory shine with such dazzling light on the warrior's fame, as to render obscure those milder rays which shed a softened lustre upon the home of rural life, where the best charities of our nature adorn the abode of peace, industry and content?

When an appeal is made to arms, in a war of self defence, how many will be found between the handles of the plough who will repair to the ranks of death—whose nerves are strung by toil, and whose hearts beat high to defend the "*aris et focis*," the homes of their fathers, the hearths of their childhood. Of the husbandman's worth and renown in arms, the ever memorable heights of Charlestown, Bennington, the King's mountain, and Orleans, are proud examples.

"Then venerate the plough." Let government foster and protect the primitive, the purest, the noblest employment of man. Let a great national school of agriculture be established, with experimental farmers attached. Let the youth be induced to study and labour in this school, from a belief that rewards and distinctions may be found in arts as well as arms. Soon would a mass of the most truly valuable information, be acquired, and diffused throughout our country, for the general benefit, and soon would many a desert waste be made "to blossom as the rose."

I would beg leave to add some extracts from my former addresses upon this interesting national subject.

While the improvements of agriculture have disclosed to the old world so many truths for ameliorating the condition of society, her kindred genius, confined to neither realms or states in its benevolence, will alike visit all countries where virtue and industry invite its presence. It has been only within a few years, that the improvements of agriculture have been deemed objects of political consideration and inquiry. It would seem as if Europe, entranced by the delirium of conquest and monopoly, had neglected the true source of national aggrandizement. While she boasted of many Cæsars, she yet wanted a Mecænas. Her Louis had read agriculture in the schools, and her Frederic, by a liberal and zealous encouragement, had furthered its practice, to the great benefit of his realm; but these petty stars were doomed to be obscured, when the glorious sun which has since risen upon the British isle, had warmed with its rays the cause of industry in all parts of the globe. By whatever standard his country may estimate the merits of Sinclair, if she deny him a rank with her Wolfe and her Nelson, the heroes of victory, yet will he proudly swell her list of worthies when placed with Jenner, Howard and Bedford, benefactors of man.

The promotion of our domestic energies has been advocated by many, as the means of producing injury to others. May we not seek to benefit ourselves without becoming the instruments of harm to others? Let other nations be great and happy; can it be supposed that Providence will exclusively protect our destinies? To rival their greatness will be a laudable ambition—to seek their injury is unworthy of a generous people.

Many again have supposed the improvements of agriculture will lessen the prosperity of commerce. Can it be believed that agriculture would act the part of so unnatural a parent, to so dutiful a child. The reverse is the fact. The plough and the rudder are united by the indissoluble bonds of interest, policy, and preservation—and both by sea and land, it is the duty of the members of the American family to cherish an affection for each other, and an attachment to the interests and welfare of their common country.

"England, proud of her strength, with patriotic pride beholds her well tilled fields, and in her whitened flocks sees industry for millions. While a nation shall continue to venerate the plough and promote its welfare, by the improvement of its domestic resources—that nation will long survive the wreck of military empires, and can only dissolve with the last struggles of political nature.

"England, independent of her commerce, possesses in her soil that vast impetus which nerves the arm of industry, and causes 'each rood of earth to maintain its man.'

"Whenever the storms of fate may assail this wondrous isle, whatever misfortunes may endanger her safety or cloud her glory, sublimed in her strength, she falls not on a barren sand, but, like Antæus of old, will receive additional vigor from the bosom of her cultivated parent. An improved agriculture gives a commanding aspect to the country it adorns; it bespeaks wealth, industry, and independence, great pillars of a state, and great ornaments of a people.

"Nations have best loved liberty who have been attached to agriculture. The plough may be justly esteemed the most virtuous emblem of a people's character, and the pursuits of rural life, while they unfold the bounties of nature, expand the heart towards nature's origin.

"The attributes of rural life are, most generally, purity and simplicity of manners. Removed from the corruptions of populous cities, the husbandman is the last who receives the taint of corruption and its concomitant evils. We have seen agricultural nations the first to adopt and the last to abandon the principles of rational liberty. The early periods of the Roman commonwealth displayed the modest virtues of a rural age, and indeed we find this primitive example remembered in the later and more splendid æras of her history. The Augustan age gave Rome a repose from arms on the bosom of the arts. The triumphs of conquest gave place to the triumphs of humanity, and the mistress of the world listened with delight to the tune of a shepherd's reed.

"Short lived has been the history of those nations who have sought prosperity from commerce alone—exposed to many evils, their wealth has often been the tempting cause which has produced their ruin. Commerce may raise a splendid fabric upon the basis of agriculture, but it is agriculture of all systems of human affairs which can stand alone.

"The wasteful wars, which have so long desolated Europe, have so far impeded her domestic pursuits, as to require the produce and industry of other nations, to supply her natural wants. This cause has created such extra prices for the necessaries of life, as to give to the countries of peace a bounteous reward for their labours. But this may not always happen, and it were better that agriculture should yield a tenfold produce, than humanity distressed create a tenfold price.

"No country ever suffered more from the want of agricultural improvement than ours. The general tillage of many parts of the union is a plunder of the soil, and a robbery of labour, and the face of the country, in many parts, bears ample evidence of the effects of that destructive system, which forbids all good.—The vast emigrations to the West seem as if the children of our *Israel* were persecuted in their native land. Indeed the manner of many of their rural employments leaves them no alternative, but to quit a *temple* of destruction and seek a land of bread.

"What must be the reflections of foreigners on beholding the state of agricultural improvement in the southern country—men, for instance, who have arrived from countries where agriculture is a political and individual blessing, where wealth, industry, and independence, are attributes of the soil. Would not travellers, on beholding many of our fields, say, sure this land has endured either the wrath of Heaven, or the scourge of war and famine? How patient a people to wring so scanty a pittance from so ungrateful a soil. And yet, we find, that the simple introduction of a *fossil manure* has wonderfully changed the face of some parts of our country, whose improvements now form a proud example.

"Our domestic resources should by no means be prematurely forced—as a young country, our progress should be rather gradual than precipitate, but resolute and persevering. Let not our agricultural and manufacturing systems be hot beds, to produce at irregular seasons and by artificial impulse, but rather the well tilled American soil, producing under the genial rays of a protecting government, ripening the fruits of industry and independence in due season.

"How much more pleasing is it to behold the smiling fields of peace than the desolate wastes of war. When the glory which for a moment attends the work of conquest shall have passed away, a wreck is left for humanity to deplore, but the benefits resulting from success in the works of peace give blessings to mankind, at which all nature must rejoice.

"The governors of countries must have been wise inasmuch as their policy has tended to the improvements of agriculture, and their governments have been stable, in proportion to the attachment of the citizen to the soil.

"All nations have afforded one striking example—their infancy, usually *agricultural*, has been pure; their manhood *commercial*, luxurious; and their old age *military*. Wicked old countries, like old sinners, have repented their crimes when too late; and revolutions have worked a change, when a people could bear oppression no longer."

Perhaps, sir, before I conclude, I should apologize for the freedom of my remarks upon manufactures. The opinions expressed are founded upon the experience, observation, and relations of others. The distinguished English author whom I have so often quoted on the subject of wool, should be heard on this matter, and his remarks should carry with them the highest authority and respect.

"The wool produced in Devonshire is wrought within itself, not as is usual in the North, in *large factories, where crowds intent only on their daily task, and urged to early, unremitted, and unvaried employment, form no habits adapted to general life, where the mind left totally without stimulous, except that which arises from the strong impulses of nature, becomes more brutal, where the best dispositions of childhood are corrupted by the designs or the imprudence of more matured vice, and where the bland manners of youth are vitiated by the perpetual intercourse with full grown depravity;* there, the artizan employed at home, in the midst of his family, superintends himself, and with the interest of a parent, not the mercenary views of a task master, all the concerns which relate to the health, the employment, the education, and the morals of his domestics."

I consider, sir, that the treasures of a nation, like those of the Roman matron, are *the children*. Whether the health, the education, and the morals of the children will be better taken care of in our large factories here, than they are in England, would, I should suppose, be well worth the attention of those most nearly and dearly concerned. Certain it is, that no profit can compensate for losses in the aforesaid particulars. I should presume that children, if taken at an early agé to work in the factories, should have school time, and play time too, allowed them, or you would soon have a white slavery, full as bad or worse than ours of a darker colour—ours being entailed, and theirs acquired; and a great falling off in the physical, as well as moral power, of those whose ancestors were the comrades of Prescott and of Starke.

I hope that I have not offended. The Yankees ought certainly to know best the trim of their own vessel. No one can admire that fine people more than I do, and I most heartily wish them success, whether in pursuit of their "gigantic game" to the coast of Japan, or their works of useful industry at home—their schools, their roads, their gallant enterprise and steady habits.

Respectfully and truly, yours,
GEO. W. P. CUSTIS.

Arlington House, 1st *July*, 1825.

From the New England Farmer.

IRRIGATION.

I have seen in the New England Farmer, several good pieces upon the subject of *Irrigation*. Perhaps it is unnecessary that more should be said; but, the general neglect of this branch of husbandry, evidently shows that the importance of the subject is not sufficiently felt by farmers in general.

I own a farm in a hilly part of the country, through which runs a small brook, which fails in a very dry season. By means of this, I have irrigated my lands to very great advantage. Where I have carried the water, my crops of grass have generally been doubled, and, in some places, increased three or four fold.

Some pieces, on which, two years ago, the grass was hardly worth mowing, last year yielded grass that lodged; so that I was obliged to cut it two weeks before the usual time of mowing, and from the same ground I cut a heavy second crop.

Last autumn, besides watering my lands, I conveyed the water so as to fill a well that was dry, by letting it spread and fill the ground above the well.

A little practice will teach any one that water may be carried where those who have not attended to the subject would think it impossible to convey it. Some of my neighbours have said that I have actually carried it *up hill*.

The process is very simple and easy, if you are provided with a proper instrument to lay out the canals. They cannot be drawn with any success, merely by the eye, or *by guess*. The best instrument for this purpose is a square frame, about 12 inches on a side, with glass tubes filled with a liquid, except a small bubble of air. These tubes should be embedded in the frame, and be parallel with the upper surface. The whole must be supported by a staff on which the frame may be elevated or depressed at pleasure.

But, an instrument of a more simple construction may be made by any farmer, in 20 minutes, that will answer the purpose very well.

Take a piece of board about 6 inches square, through the centre of this bore a hole, and put in a staff about 4 feet long, with the lower end sharpened to stick into the ground. Upon this standard, lay a larger board plained smooth. Upon this, pour water and turn the board so that the water will move very gently in the direction in which you wish to lay the canal. This will give it a proper descent.

I begin my operations by making a dam across the stream with stone or other materials, from one to three feet high, as the situation of the ground requires. When I make the dam of stone, I lay the largest stone at the bottom, and the second tier I draw back, up stream, six inches or more, so that the lower stones may project, far enough to receive the flood water when it pitches over the dam. This will prevent a deep hole being worn out below, which might endanger the dam and do other mischief.

I then begin the canal on the bank, keeping it level and choose to make the lower side with stone till I get beyond the reach of high water, as earth would be washed away. If the bank of a stream is a rock, and too high to raise a dam over it, a trough of boards or plank may be laid along the side of the bank till you can find suitable ground to begin your canal.

I set my instrument for levelling so as to range with the surface of water in the pond, and then, by looking across it, I see at once where the canal must be laid. I then send a man with a hoe, beginning at the upper end of the canal, to make marks in the turf to direct its course. These marks, if the ground be quite even, may be a rod apart, but, if it be uneven, they should be as nigh as three or four feet, for, if they are distant, there will be danger of running the channel too high or too low, and thus increase the labour of making the canal.

After having marked out a suitable portion of the canal, I put in the plough so as to turn the furrow down hill and carefully keep it upon the line of marks, and, after drawing about two furrows, clear it out with a hoe, and this will make a canal sufficient to carry water to a great extent. Two men with a team will make from one to two hundred rods a day.

This canal, being nearly level, will not be gullied out by a swift current. You may dam it and overflow it where you please; or, which is better, put in the bank, at different places, boards with an auger hole through them, to let out such a quantity of water as you please.

The ground below your land will be filled with water, and springs will be made often many rods below. To catch your waste water, and more effectually to irrigate your ground, it will be necessary to have a succession of canals one below another, as the extent of your ground seems to require. These canals lying parallel to each other along the sides of your hills, you may water your ground to a great extent. The good effects will be visible, even where the ground is not ever ploughed, for the earth being filled with water, and kept full till the grass has nearly attained its growth, it will not suffer with drought.

A loamy soil is most favourable for irrigation. Sand and gravel are so loose, that the water immediately settles into them, to the more solid earth beneath, and the surface receives but little benefit. Canals of this kind can be made at very little expense, and a very little attention will keep them in repair. One dollar laid out in this way with a little care, yields five dollars a year for ever.

In those parts of the country which abound with hills and with streams, the water rightly applied, would increase the produce of our farms enough to pay all our taxes, and to defray every public expense in our towns. A.

SIZE OF THE UDDER OF A COW,

The property of a Pennsylvania Farmer.

From top to bottom of the bag, . . .	19 inches
Width between teats, ...	11½ "
Circumference of teat, ...	11 "

AGRICULTURAL PROSPECTS.

York, Va., June 8th, 1825.

> "Then comes the father of the tempest forth,
> Wrapt in the blackest gloom.—Then issues forth
> The storm with sudden burst; and hurls the
> Whole precipitated air, down in a torrent,
> On the passive main, descends th' etherial force,
> And with strong gust, turns from its bottom, the
> Discoloured deep.—Through the black night, that
> Sits immense around, lash'd into foam, the
> Fierce conflicting brine seems o'er a thousand
> Raging waves to burn."

Had the immortal author of "The Seasons" lived in this day, he could not have more truly and forcibly described the dreadful visitation this part of the state of Virginia has recently experienced.—One week ago, and the prospects of the agriculturists were cheering. Our wheat crops promised an ample reward to the labours of the husbandman—our corn crops, though young, were flattering: at one dread swoop, all our hopes, and fond anticipations of a full remuneration for our labours, are prostrated. On the evening of the 3d inst., the wind from east-north-east, commenced a heavy blow; it continued through the night, the whole of the fourth day and night—fences and large trees levelled with the earth. Our wheat crops were in full bloom. The tide is reported to have been two feet higher than now recollected at any preceding gust. Our wheat fields, it is believed, will not yield as much grain as was seeded on them. Our corn is levelled to the ground—its blades beaten into the earth, where the fields had been recently ploughed; and the blades not buried, are twisted and shreded to pieces. Never have I heard such a general complaint, and where I have visited, never seen more general destruction and despondence, at this period of the year, when it is too late to replant corn with any hope of its producing grain. This, I fear, is an incurable suffering. I have this day replanted my cotton. The consequences of the storm must be very serious, and produce a considerable advance in bread stuffs. Many of our farmers had commenced the culture of cotton—large fields were planted, where a few acres only were grown formerly; and consequently the corn crop much curtailed. I feel as speaking within bounds, when I say that more cotton would have been grown in this section of Virginia this year, than has been in the last half century, aggregately; not so now. This branch of agricultural labour is destroyed nearly—it is beaten and torn to pieces, and parching by the hot, airless weather which now visits us. The thermometer this day, (5 P. M.) the hour I am writing, is at 86. Grain has recently taken a rise here, and must be still in advance—for such are the gloomy prospects of the time, that farmers who have corn to sell, will be intimidated by the present scene from selling, until they can have better assurance of more abundant crops than is promised at present. All prudent farmers will reserve, at least for a time, their present surplus supply. Such is the injury that the corn has sustained, and particularly on the banks of the rivers, that an half crop is as much as can be calculated upon. This loss, with the diminished quantity planted, must make this grain advance considerably. The oldest person among us does not recollect a gust of the same violence and continuance.

EXTRACT FROM A CORRESPONDENT.

Columbia, 17th June, 1825.

Cold rains killed our cotton during all April; want of seed deprived us of the replanting, and now stands a tenth to fifteenth too thin in the drill—and though more planted than usual, this circumstance will prevent full crops. The bearded wheat suffered exceedingly with the rust; other species bring a full crop. Maize stands well, and bids fair for abundance. If I should not tax your time too heavily, will thank you for an answer to this as early as convenient. We desire much to see the union of the gin and horse mill in the same house, and Mr. Patterson's demonstration of keeping a draught horse for three cents a day, will interest us still more. Ours, under present management, cost six times that amount.

BOTANY.

PINNOCK'S CATECHISM OF BOTANY.

(*Continued from page* 119.)

'CHAPTER XI.

Class V.—*Pentandria*. (Five Stamens.)

SEVEN ORDERS.

Q. Give me some examples of this class.

A. It will be very easy to do so, for in the class Pentandria is comprised one-tenth of the vegetable world; and it includes many very agreeable flowers as well as noxious plants. The primrose, oxlip, cowslip, and polyanthus belong to it: and so does a tribe of plants called *Luridæ*, which is a name expressive of their noxious appearance and strong scent.

Q. Describe the polyanthus.

A. The polyanthus, so much admired and cultivated by florists for its variety and beauty, is derived from the primrose; and is a pleasing instance of the improvement that art is capable of bestowing on nature.

Q. How is it known?

A. By its calyx consisting of one leaf, tubular, sharp, and upright; the blossom also tubular and of one petal, with the border divided into five segments; the seed-vessel is a capsule enclosed in the calyx, containing only one cell; and the stigma is globular. The species is marked by a five-angled calyx, the wrinkled surface and indented edges of its leaves.

Q. How are those plants belonging to the tribe called *Luridæ* distinguished?

A. Besides having the characteristic marks of five stamens and one pointal, they coincide in a calyx that is permanent, and divided, like the corolla, which consists of one petal, into five segments. Their seed-vessel is either a capsule or a berry, enclosed within the flower.

Q. Will you furnish me with an example?

A. Yes, I will first mention the deadly nightshade (*Atropa Belladonna*,) as it is the most fatal of any in its effects. The leaves are egg-shaped and undivided, and the blossoms of a dingy purple. Woods, hedges, and gloomy lanes mostly conceal this dangerous plant; and its bright shining black berries have too frequently tempted children to partake of its dangerous poison.

Q. What are the names of the other poisonous plants belonging to this class?

A. The thorn-apple, (*Datura:*) henbane, (*Hyosycamus,*) the smell of which is exceedingly disagreeable; the nightshade (*Solanum*) which comprises two kinds, the woody nightshade, known by its blue blossoms and red berries; the garden nightshade, distinguished by its white blossoms and black berries.

> "Oh! wander not where dark *Solana* showers
> Her baleful dews, and twines her purple flowers,
> Lest round thy neck she throw her snaring arms,
> Sap thy life's blood, and riot on thy charms.
> Her shining berry, as the ruby bright,
> Might please thy taste, and tempt thy eager sight;
> Trust not this specious veil; beneath its guise,
> In honied streams a fatal poison lies."

Q. Does not the passion flower belong also to this class?

A. Yes; the common blue passion flower, which I shall describe, is a native of Brazil, and may be trained up to more than forty feet high. It is hardy enough, however, to grow here in the open air, and is now very common in England.

Q. Whence did it derive its name?

A. From a fanciful resemblance of the different parts of the flower to the passion of Christ, which the Jesuits, who went as missionaries to South America, thus explained:—The three pistils, they said, represented the three nails with which our Saviour was nailed to the cross; the five stamina the five wounds; and the radiant purple nectary, the rays that they supposed surrounded his head when expiring on the cross.

CHAPTER XII.

Class VI.—*Hexandria*. (Six Stamens.)

SIX ORDERS.

Q. What kind of plants belong to the class Hexandria?

A. Our gardens receive many of their most splendid embellishments from flowers of this description. The gaudy tulip, with its striped coat of various hues; the hyacinth, of different colours and delightful fragrance; lilies of every kind; the magnificent amaryllis; and the gentle American aloe, which rises to the height of twenty feet, and many other exotic plants of the liliaceous tribe, are comprised in this class.

Q. Do not many of our smaller garden flowers also belong to this class?

A. Yes; the modest snow-drop, the golden crocus, and the innocent and fragrant lily of the valley, with the daffodil, narcissus, and many others.

Q. Give me a botanical description of the snow-drop.

A. The snow-drop (*Galanthus nivalis*) is one of the earliest harbingers of spring. Its calyx is a sheath, and the corolla is superior, consisting of six white petals, a little tinged with green, of which the three innermost are the shortest. This beautiful little flower never appears to more advantage than when it intermixes its blossoms with those of the golden crocus, to which in its manner of growth and external structure, it is nearly allied.

> "How snowdrops cold and blue-eyed harebells blend
> Their tender tears, as o'er the stream they bend;
> The love-sick violet, and the primrose pale,
> Bow their sweet heads, and whisper to the gale;
> With secret sighs the virgin lily droops,
> And jealous cowslips hang their tawny cups."

Q. Does not the barberry belong to this class?

A. Yes; the barberry is a shrub common in hedges, and bearing bright, red, heavy berries in autumn. When this coral like fruit is ripe, it adds much to the beauty of shrubberies; but its acidity is so great, that even the birds refuse to eat it.*

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* "I have," says Mr. Phillips, the author of Pomarium Britannicum, "a barberry tree in my garden, near twenty feet in height, the branches of which extend over a circumference of sixty feet. It has been cover-

CHAPTER XIII.

CLASS VII.—*Heptandria.* (Seven Stamens.)

FOUR ORDERS.

Q. What example will you give in this class?

A. The horse chestnut (*Æsculus Hippocastanum.*) which is a very common tree in parks and pleasure grounds, bearing elegant clusters of flowers in the form of pyramids; and is certainly one of the finest trees of British growth. Its fruit, which is contained in prickly husks, has been found of considerable service in fattening cattle.

Q. What are its botanical characters?

A. A small calyx, of one leaf, slightly divided at the top into five segments, and swelling at the base; a corolla of five petals, inserted into the calyx, and a capsule of three cells, in one or two of which only is a seed.[*]

CHAPTER XIV.

CLASS VIII.—*Octandria.* (Eight Stamens.)

FOUR ORDERS.

Q. What kind of plants are comprised in this class?

A. Various shrubs, both foreign and native: among the foreign ones are the Balm of Gilead shrub, which grows in several parts of Abyssinia and Syria; the sugar-maple of North America, which is fifty or sixty feet high; and the rose-wood tree, in the island of Jamaica, which yields an odoriferous balsam, and whose wood is much used by our cabinet-makers for *veneering* tables, &c.

Q. What native plants are comprised in this class?

A. The common maple and sycamore trees, and the cranberry and whortle-berry shrubs, with that well known plant, the common heath, growing wild on mountainous wastes in almost every part of England.

CHAPTER XV.

CLASS IX.—*Enneandria.* (Nine Stamens.)

THREE ORDERS.

Q. What examples can you furnish in this class?

A. The class Enneandria includes several foreign plants, such as cinnamon, cassia, sassafras, bay, camphor, and rhubarb; but we have only one plant that belongs to it, growing wild in this country, which is the flowering rush (*Butomus umbellatus.*)

Q. Describe it.

A. The flowering rush grows in the water, and has a round smooth stalk, which rises from one to six feet high, according to its situation; at the top of which is a head of bright red flowers, sometimes not less than thirty; three short leaves form the cup, and the corolla has six petals. This plant, so stately from its height, and its beautiful tuft of flowers, would make a charming appearance in canals or other pieces of water, if cultured by human art: and it is so hardy as to defy the severest frost.

"Flow in soft harmony, ye silver waves;
Obedient mermaids, leave your crystal caves;
Ye lakes and streams, unfold your hidden flow'rs,
For fair BUTOMA decks her sedge-wove bow'rs."

CHAPTER XVI.

CLASS X.—*Decandria.* (Ten Stamens.)

FIVE ORDERS.

Q. What kind of plants does this class comprise?

A. In the class Decandria are comprised several trees of foreign growth, as well as various plants and flowers common in this country. The lignum vitæ tree, logwood and mahogany, all natives of the West Indies, each belong to this class.

Q. What well known flowers belong to it?

A. The rich carnation,[*] the modest sweet william and the whole tribe of pinks.

Q. Is there not a plant belonging to this class which exhibits a very curious instance of vegetable irritability?

A. Yes; it is called the fly-trap of Venus, and is a native of America.

Q. Give a description of it.

A. At the bottom of the footstalk of this curious plant, are several leaves, each of which are divided into two lobes at the extremity, having long teeth on the margin like the *antennæ* of insects, and armed within with six spines; these lie spread upon the ground round the stem, and are so irritable, that when a fly happens to light upon a leaf, it immediately folds up and crushes it to death.[†]

Q. Describe the tree from which the wood called mahogany comes.

A. The mahogany tree is of large dimensions, with winged leaves and small white flowers; its branches are numerous and spreading; its leaves are alternate and winged, with four or five pair of leaflets, somewhat spear-shaped. It grows in Jamaica and Honduras.

Q. Has not the cutting of mahogany been a source of considerable profit to the British settlers at Honduras?

A. Yes; in some instances the profit attending it has been very great. A single tree has been known to contain twelve thousand superficial feet, and to have produced 1000 *l.* sterling. The body of the tree is of course the most valuable; but, for ornamental purposes, the limbs are preferred, as the veins are more variegated, and the grain is closer.

CHAPTER XVII.

CLASS XI.—*Dodecandria.*[*] (Twelve Stamens.)

SIX ORDERS.

Q. Give an example of this class.

A. I know of no one more valuable or interesting than *weld*, or dyers' weed, which is found on barren ground or on walls; and in the clothing counties in England is cultivated to a considerable extent. Its leaves are spear-shaped and entire, with a tooth-like process on each side of the base. The flowers are yellow and in long spikes; and the calyx is divided into four segments.

Q. For what is it useful?

A. It affords a most beautiful yellow dye for cotton, woollen, silk, or linen, which is procured from its roots or stems; and blue cloths dipped in a decoction of it become green. The yellow hue of the paint, called Dutch pink, is also obtained from this plant; and it is said that the ancient Britons used it to stain their bodies with.

CHAPTER XVIII.

CLASS XII.—*Icosandria.* (Twenty Stamens.)

THREE ORDERS.

Q. What plants belong to the class Icosandria?

A. A great variety of fruit trees, such as the apple, pear, cherry, plum, nectarine, peach, almond and medlar. Also various shrubs and herbs; such as laurels, roses, strawberries, &c.

Q. Is it true that all plums derive their origin from the bullace or wild plum?

A. It is an established fact; though few persons would suppose, that the magnum bonum, the green gage, and several others of exquisite flavour, which are now common in our gardens, could be indebted for their parent stock to the wild plum.

Q. Do you not consider the rose as one of the most elegant and fragrant of all vegetable productions?

A. Yes; and for that reason it has been denominated "the queen of flowers." It is so general a favourite, that scarcely any garden is destitute of a rose. That elegant perfume, called *otto of roses,* is extracted from its petals by distillation: but so small a quantity of this aromatic oil can be procured, that the true otto is exceedingly dear. It is said that an hundred pounds weight of the flowers will yield only half an ounce of it.

"Fair is the Rose, but withers soon away;
Fair the spring Violets, but soon decay;
Fair is the Lily, but in falling dies;
And the white snow not long unsullied lies:
Thus blooming youthful beauty quickly flies."

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ed with blossoms this spring, and had a pleasing effect in the shrubbery; but it was so offensive for about a fortnight, that no one would walk near it during that time. It seems particularly attractive to singing birds, wherever it is planted, especially the bullfinch and the goldfinch, both of which often build in these bushes. A very singular circumstance has been stated respecting the barberry shrub,—that corn sown near it proves abortive, the ears being in general destitute of grain; and that this influence is sometimes extended to a distance of three or four hundred yards across a field. This is a just cause for banishing it from the hedge rows of our arable fields, for which, otherwise, its thorny branches would have made a desirable fence."

[*] We insert in this place the following interesting account of chestnut trees, from *Phillips's Pomarium Britannicum:*

"The remains of very old decayed chestnut trees may be seen in the Forest of Dean, Enfield Chase, and in many parts of Kent. At Forthworth, in Gloucestershire, is a chestnut tree fifty-two feet round; it is proved to have stood there since the year 1150, and was then so remarkable, that it was called 'the great chestnut of Forthworth.' It fixes the boundary of a manor. Mr. Marsham states that this tree is 1100 years old.

"The great chestnut tree, near Mount Ætna, is perhaps one of the most extraordinary trees in the old world. It is called 'the chestnut tree of an hundred horses,' from the following traditionary tale: 'Joan of Arragon, when she visited Mount Ætna, was attended by her principal nobility, when a heavy shower obliged them to take shelter under this tree, the immense branches of which sheltered the whole party.' According to the accounts given of it by Mr. Howel, this chestnut tree is 160 feet in circumference, and although quite hollow within, the verdure of the branches is not affected; for this species of tree, like the willow and some others, depends upon its bark for subsistence. The cavity of this enormous tree is so extensive, that a house has been built in it, and the inhabitants have an oven therein, where they dry nuts, chestnuts, almonds, &c., of which they make conserves; but, as these thoughtless people often get fuel from the tree that shelters them, it is feared that this natural curiosity will be destroyed by those whom it protects."

Veneer'ing, *part.* covering articles of furniture with ornamental wood.

[*] The bare mention of this flower brings to mind the following admirable lines of the poet Shenstone:

"Search but the garden, or the wood,
Let yon admir'd carnation own,
Not all was meant for raiment or for food,
Not all for needful use alone.
There while the seeds of future blossoms dwell,
'Tis colour'd for the sight, perfum'd to please the smell.

Why knows the nightingale to sing?
Why flows the pine's nectareous juice?
Why shines with paint the linnet's wing)
For sustenance alone? For use?
For preservation? every sphere
Shall bid fair pleasure's rightful claim appear."

Antennæ, the feelers.—See *Catechism of Entomology.*

[†] Dr. Darwin observes, that "he saw this plant in the collection of Sir B. Boothby, of Ashbourn-hall, Derbyshire, (1788,) and that on drawing a straw along the middle of the rib of the leaves, as they lay upon the ground round the stem, each of them, in about a second of time, closed and doubled up, crossing the thorns over the opposite edge of the leaf, like the teeth of a spring rat-trap."

[*] Although the word *Dodecandria* implies twelve stamens, yet this class includes such plants as have from twelve to nineteen.

RECIPES.

INDIGESTION.

[From one of the ablest physicians our country ever produced, and a dearly valued friend, now no more, the editor received, on leaving home in July, 1824, for the benefit of his health, the following directions, which may convey useful hints to others in like circumstances.]

The habitual complaints by which you are annoyed, evidently proceed from dyspepsia; as the remedies are much varied by circumstances, and thence apt to be forgot, I here state them for reference:

The *diet* should be simple, easy of digestion; the nearer to plain animal food and bread, the better; salt food is preferable, if not hard or dry; bacon and herrings the best; the fresh meat rare, and with the natural gravy merely; broth of chickens or the bone and sinewy parts of butchers' meat should be used as a material part of dining; and milk, if it agrees, in any form.

Vegetable diet is desirable, as far as the *digestion will admit*, the raw fruits and vegetables, especially; cabbages, turnips, and the acid fruits avoided, and the skin and seed of all; potatoes, beets, and celery are best; unoily, dry, or toasted bread, with syrup or very little butter

Drink water, and with nothing but good old spirituous liquor—gin the best—soda or magnesia water when the stomach is acid; lime water also relieves that.

All dieting should be abstemious: rest after eating, dinner especially.

Remedies.—The rheubarb alkaline bitters should be used night and morning, and so as to obviate costiveness, some magnesia or soda water drank daily, say a bottle at mid-day: ginger syrup should be used with it: magnesia also taken when the stomach is acid.

When the tongue is foul, vertigo or headache considerable, take a 10 grain calomel pill at night; magnesia to work it off, if necessary, in the morning. When headache and acid stomach or wind, vomit in the morning with salt water. The nitric acid should be used to vary the above remedies, say for one week of five; and the cold bath should be used two or three times a week, the head and feet daily.

The belly should be rubbed well with Cayenne pepper in spirits, two tea-spoons full to a half pint, every morning. There is advantage in wearing a broad buckled belt round the waist, say two handsbreath; the whole surface rubbed once a day with a flesh brush.

Exercise before breakfast and dinner cannot be too great, and is indispensable to the effect of any remedies.

Occasional advice may vary these directions, but nothing without time and system can cure dyspepsia. Partial attention is of very dubious effect.

[Relief has been found by adherence, as near as practicable, to the above directions: material departure from them, especially in reference to diet, by eating turnips, cabbage, &c. is never committed with impunity. Much experience has taught, that hot bread of any kind is particularly unwholesome. Milk-biscuit, and dry toast and butter are best—the latter is now exclusively eaten, with the best effects. By *dry* toast is meant that with which butter is used *only at the moment of eating it.* Toast is too often spoiled and made unpalatable by being placed, while warm, in a *heap* on the plate, to sweat and grow tough, instead of being kept in a toast rack or otherwise, each slice separate and dry. After some months it becomes more acceptable than hot bread in other forms.] *Edit. Am. Farmer.*

DYSPEPSIA.

Another prescription, by Doctor Osgood, a celebrated physician in Havana.

Take two drachms of tartarised antimony, and one ounce of simple ointment or hog's lard, mix them together, and rub the size of a nutmeg on the region of the stomach every morning and evening, until an inflammatory eruption is occasioned.

Tinctura Ferri Tartarisata.

Dose, from half a drachm to one drachm, in a gill or more of sweetened water, with two drachms of brandy, and half a drachm of gum Arabic, one hour before or after each meal.

THE FARMER.

Baltimore, Friday, July 1, 1825.

The Military Academy at West Point.

We promised in the last number of the American Farmer, to present some such views of this national academy, as our personal observation there during the last month, had enabled us to take, and such as might appear admissible in a journal belonging and devoted to the farmers and planters of the country, at whose expense the academy is upheld. It is believed, that until within a very few years, the benefits of the highly valuable education, gratuitously bestowed on the students at West Point, were engrossed by the Atlantic states, and particularly by the sea-port towns; for besides the general rumour and impression to that effect, which led to a proposition in Congress, to divide the cadets amongst all the states in *proportion* to their population; on turning now to the list of graduates at the late examination, admitted as late as 1821, there will not be found a single one from either Ohio, Louisiana, Indiana, Missouri, Alabama, Mississippi, Illinois, Michigan, or Florida. But this partial appropriation of the institution has ceased, and its advantages are now distributed, if not by positive law or regulation, by the understanding and usage of the department of war, equally amongst the states and territories, in proportion to congressional representation. Of the 99 candidates, that is those who have received their warrants, and had reported themselves to Col. Thayer, the superintendant, between the first and twenty-third of June, for examination previous to their admission:—Maine had sent 1, New Hampshire 3, Massachusetts 5, Rhode Island 1, Connecticut 3, Vermont 1, New York 13, New Jersey 3, Pennsylvania 13, Delaware 1, Maryland 5, Virginia 9, North Carolina 4, South Carolina 4, Georgia 5, Kentucky 7, Tennessee 3, Ohio 4, Louisiana 1, Indiana 1, Mississippi 1, Missouri 1, Alabama 3, Illinois 0, Michigan 1, Florida 0, District of Columbia 3. Illinois had two, however, admitted in 1824, and Florida two admitted in 1822 and 1823, so that scarcely a state or territory, is without its representation at this national school; and under present regulations, every portion of the Union will draw from it annually, its proportion of civil and military science. A privilege which none of them should disregard, when they remember that a West Point graduate is qualified to survey and lay out, and knows how to construct with the best materials, and with most economy and effect, their turnpike roads, their canals, their bridges, and public edifices of various kinds; and that in time of war, be the exigences what they may, that proclaim to us "we must fight"—in the acquirements of these citizen-soldiers thus educated, they will have within their own bosom, a resource above all price. These graduates of the military academy, will be at hand to instruct the officers of the militia, in all the exercises and manœuvres of the field; they can designate with certainty the most eligible points, as well as the best plans of defence; so that whether each member of the republic have regard to a state of peace and the arts belonging to it, or to a condition of war, inseparable as it would seem from the best organized systems of political association, it will be well to secure for itself, its share of the fruits which are annually dispensed from West Point.

That the parents of the cadets and the public generally, may feel assured that the annual examinations of the cadets, are conducted fairly and rigidly, the regulations for the government of the academy, require, that the Secretary of War should appoint, annually, a "Board of Visiters," consisting of gentlemen of literature and science, in different parts of the Union to attend; and that the Secretary of War may himself be made thoroughly acquainted from an impartial source, with the real condition, prospects, and progress of the institution; these visiters attend strictly to the performances of all the classes—keep a journal of each day's exercises, and, finally, at the close of the examination, make up and transmit to him, a report upon the course of instruction pursued, the proficiency of the students, the state of the library, and the philosophical and chymical apparatus, the civil economy, and the military police and administration of the academy; some of the board always being military gentlemen.

The board of visiters convene on the first Monday of June, and generally continue in session about three weeks. The late one, by holding sessions as early as five, A. M. finished their labours on the 23d, when a journal of each day's proceedings, and a full report on the state of the institution and its wants, were transmitted to the war department. It is not our design, even if it were proper, to anticipate this report, but merely to speak in general and familiar terms of things not coming within the scope of it; and which, it may yet be satisfactory to the community to learn. Of the gentlemen of different parts of the United States, selected by the Secretary of War as a board of visiters for 1825, there were in attendance:—Major Hamilton of South Carolina, the chairman of the military committee of the House of Representatives in Congress, the Hon. E. Everett, professor of Greek literature, at Cambridge, and member of Congress elect from that district, Professors Dewey and Bancroft of Massachusetts, Col. Hugh Mercer of Virginia, Col. Eustis and Col. Walbach of the army, the Hon. Mr. Parrot of New Hampshire, Rev. O. B. Brown of the District of Columbia, and J. S. Skinner of Baltimore. Major Hamilton was unanimously elected president of the board, and Mr. Everett was in like manner elected secretary.

The Secretary of War visited the academy on Wednesday the 8th, attended the examinations and reviewed the military exercises of the cadets, inspected every department of the institution, and on the day of his departure, addressed to them a valedictory exhortation, which for its elevated principles and pathetic appeal to their honour, ambition and patriotism, could not but be deeply felt, and must be long remembered.

Prior to the final adjournment of the board, Major Hamilton was requested, in its behalf, to express to the gentlemen of the Academic staff, the high satisfaction experienced by the board at the abundant evidence afforded of the very honourable manner in which they had discharged their duties, and of the obligation due to them from the parents of the cadets, and the country at large for the valuable lights disseminated annually by their agency through all the states. This service was rendered by Major Hamilton in a feeling and appropriate manner, becoming the statesman and the eloquent eulogist of the gallant Perry. He congratulated them on the high and just renown they had secured to the institution;—of Col. Thayer, the superintendant, he observed, that he might contemplate it with proud complacency, and exclaim with the great Latin poet, *exegi monumentum.*

A valedictory delivered at the instance of the board, by our learned secretary, gave a touching and impressive finale to our intercourse with the cadets. Of this address it is sufficient to say, that it was worthy of the elegant scholar by whom it was pronounced, and that if every child had been his own, and wisdom and parental tenderness had inspired him for the occasion, his accents could not have been more kind, nor his words more replete with good advice. Could we presume to criticise Mr. Everett's talents as a public speaker from this inadequate test of them, we should say that his performances will be characterised as the finest specimens of chaste unostentatious elocution. Such are the clearness and accuracy of his enunciation, that the attentive and delighted hearer, loses not a word nor a syllable; but in a southern latitude his manner would, perhaps, be thought too circumspect and guarded. We should say he was better qualified by the happiest use of great learning, to enlighten a select body than to arouse and animate a popular one. If his pure patriotism and profound erudition, were kindled up and impelled by a due portion of southern fire, he would gain by the power of increased velocity, more than would be lost by any little irregularity of motion. However, we must not carp at fruit that we cannot reach.

For the present we shall take leave of the subject by subjoining the

List of the five Cadets, distinguished in each class, at the Examination in June, 1825*—and who are therefore entitled to have their names enrolled on the Army Register.*

NAMES.	Studies in which each Cadet particularly excelled.
First Class.	
Alexander D. Bache, of Penn.	Mathematicks, French, Natural Philosophy, Drawing, Engineering, Chymistry, Mineralogy, Geography, History, and Tactics.
Peter McMartin, of N. York.	Mathematicks, &c., as above.
Alex'r H. Bowman, of Pennsylvania.	Mathematicks, &c., as above.
Thompson S. Brown. of N. York.	Mathematicks, &c., as above.
Daniel S. Donelson, of Tennessee.	Mathematicks, &c , as above.
Second Class.	
Wm. H. C. Bartlett, of Mississippi.	Natural Philosophy, Chymistry and Drawing.
Thomas S. Twiss, of Vermont.	Natural Philosophy, Chymistry and Drawing.
William Bryant, of Virginia.	Natural Philosophy, Chymistry and Drawing.
Thomas J. Cram, of N. Hampshire.	Natural Philosophy, Chymistry and Drawing.
Charles G. Ridgely. of Delaware.	Natural Philosophy and Chymistry.
Third Class.	
William Maynadier, of Dist. Col.	Mathematicks and French.
Lucien J. Bibb, of Kentucky.	Mathematicks, French, and Drawing.
Ebenezer S. Sibley, of Michigan.	Mathematicks and French.
Pierce B. Anderson, of Tennessee.	Mathematicks and French.
John Child, of Massachusetts.	Mathematicks, French, and Drawing.
Fourth Class.	
Hugh W. Mercer, of Virginia.	Mathematicks and French.
Wm. P. N. Fitzgerald, of N. York.	Mathematicks and French.
Albert E. Church, of Connecticut.	Mathematicks and French.
Walter B. Guion, of Mississippi.	Mathematicks and French.
David M. Farrelly, of Penn.	Mathematicks and French.

In our next, if we can find room, we shall give a sketch of the studies, and. as opportunity occurs, some specimens of the examination of the first class on civil engineering.

☞THE TRUSTEES OF THE MARYLAND AGRICULTURAL SOCIETY will meet at Waverly, the residence of George Howard, Esq., on *Thursday,* 21*st July,* and not on the 14th, as contemplated.

☞VALUABLE IMPORTATIONS.—The editor learns that Col. Powel has imported some fine Southdown sheep, and has ordered more of that, and of the New Leicester breed, in addition to a portion of the flock in France, of which Mr. Brown, our minister, had, at the desire of his brother, conveyed information to Col. P. through Mr. Carey. We understand there is now no legal obstacle to the exportation of breeding sheep from England. Col. Powel has purchased Mr. Champion's celebrated heifer *"Miss Points,"* and expects her, with others of great value, in November next, in time for the Pennsylvania Cattle Show.

FINE FRUIT.—Within the last week there has been presented to the Editor of the American Farmer an apricot from the garden of John Willis, Esq. and gooseberries from that of Major Isaac M'Kim, so much beyond the ordinary size and quality of such fruit, as really to excite a doubt, at first sight, to what species of fruit they belonged. The apricot measured in its largest circumference 7 3-8 inches. The gooseberries between 3 and 4 inches, and weighed half an ounce each.

Mr. Willis calls his the true Roman apricot, and says he has sixty trees for sale.

TOBACCO.—John Lee, of Frederick county, sold one hhd. at $45—four at $30—and four at $18 per hundred. Red and yellow tobacco still in good demand; none in market.

Amount of inspections in the three state warehouses for the last week, viz:

Warehouse No. 1,	. . . .	150 hhds.
2,	. . . .	127
3,	. . . .	108—385.

PUBLIC SALE, AT BOSTON, OF SAXON SHEEP.

On Thursday, 14th July, next, at 9 o'clock, at Brighton, near Boston, opposite the seat of Samuel W. Pomeroy, Esq., the entire flock of Saxony SHEEP, imported per barque Bramin, consisting of 81 Rams, 57 Ewes, and 29 Lambs. These Sheep were selected with great care during the whole of the last winter, and no pains or expense were spared to procure the very best sheep from the electoral as well as from private flocks, it having appeared from the experience of the past year, that none but the very finest animals could be sold with profit. The owners are confident that another flock, equally select, could not possibly be procured from that country.

Samples of the wool from each Sheep will be exhibited until the day of sale, by Messrs. Peter Remsen & Co., Hanover square, New York; by Messrs. J. D. & A. Whitney, Northampton, and at the office of

COOLIDGE, POOR & HEAD, Auct'rs.

Boston, June 25, 1825.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9	9 50		
BACON, and Hams, . .	lb.	7	9	10	
COFFEE, W.I. Green, .	—	17½	18	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	29		
Georgia Upland, . . .	—	22	26		
COTTON YARN, No. 10,	—	45			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	11	13	14	16
Dipt, ...	—	10	11	11	12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	35	36		
FISH, Herrings, Sus.	bbl.	2 18		2 25	
Shad, trimmed,	—	6	6 50	7 00	
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 75			
Fine, ...	—	4 25			
Susquehanna, superfi.	—	4 38			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	42	46		
Wheat, White, ...	—	95	1 00		
do. Red, ...	—	80	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, ...	—	3	3 25	3 50	3 75
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		30	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	200			
HOGS' LARD, ...	lb.	8	9		dull
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, Havana, .	gal.	24	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7	8
NAVAL STORES, Tar,	bbl.	1 62		1 87	
Pitch, ...	—	2 00			
Turpentine, Soft, . .	—	2 62	2 75		
OIL, Whale, common, .	gal.	24	26		
Linseed, ...	—	80			
PORK, Baltimore Mess,	bbl	15	15 50		
do. Prime, . . .	—	10 75	11 50		
PLASTER, cargo price,	ton.	4 00	4 25		
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 25	3 75		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	24	24½	37	75
PEACH BRANDY, 4th pr	—	30	82	1 00	
APPLE BRANDY, 1st pr	—	40			
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	9 50	10		
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	75			
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	2 50		3 00	
Nutmegs, ...	—	2 00		2 25	
Pepper, ...	—	19		25	
SALT, St. Ubes, ...	bush	40			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 00	2 50	3 00	4 00
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	3	7		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

REPLY TO COL. PICKERING ON NATIVE CATTLE, &c.—No. 3.

Jonathan Roberts, Esq.

President of the Penn. Agricultural Society.

Dear Sir,

Col. Pickering quotes Major Rudd's assertion, that "if the improved short horns were every where disseminated, the produce of beef, on a given extent of land, would be nearly doubled; that they yield about 8 or 9 pounds of butter per week; that, in form and *handling*, they are a perfect contrast to the old breed; that he believes, they consume less food; and that, for the general purposes of countries where beef is in great demand, they *are, beyond all doubt, the best.*"

That beef is in great demand in New England and in all the Atlantic states, is too evident to require illustration. And if its amount, as Major Rudd asserts, would be nearly doubled, by the early maturity of a race, which, in three years, afford as much weight upon the same food, as most others in six years, their great value as dairy cattle should not *alone* be taken into the account.

The product of butter depends upon the properties of the cow, the quantity and quality of food, the care, skill, and intentions of the person by whom it is made. It, in common with all manufactured articles, is influenced by the material of which it is composed; but, it is affected by chymical causes: the vibrations of the atmosphere—the shape of the milk-pan—even by "the dexterity of finger in skimming the cream." The quantity may be increased if the quality be not regarded; the weight must be augmented if the buttermilk, as in New England, be not well expressed, and salt be profusely supplied.

The quantity and quality of the butter are not the best tests of the richness of the milk, much less *of* the properties of the cow, unless a comparative estimate be made by the same person, in the same manner, under similar circumstances, and at various times. The secretion and the quality of the milk are affected by the state of the animal s health, by the operation of external causes, even by harsh treatment or fright.

It has not been contended by me, nor by any advocate of improved short horns, that the selection made by Major Rudd was, from the strain *most valued for dairy* purposes. On the contrary, although his cows afford from 8 to 9 pounds of butter per week, more than twice as much as the product of the Oakes' cow when she was not forced, it is well known that he regarded what are called, technically, the grazing, rather than the dairy tribes, of Colling's stock.

The early maturity of improved short horns has been evinced in so many instances and published in so many books, that I should exhaust your patience, if I were to quote the long records of British writers and cattle show reports. I will state a few which have occurred in England, and I am prepared to authenticate, by evidence which would be received in a court of justice, the facts which I shall relate in regard to some animals reared upon my own farm.

Col. Pickering alleges, that "Major Rudd became the purchaser of Colling's stock, with the principal if not the only view of becoming what Mr. Colling had been, *a breeder of cattle for the profit to be derived from the sales.*" His having given high prices, *with a view to profit*—his views having been realized—his profits continued, by high prices still obtained, cannot be brought in evidence, that his judgment was unsound, or that the cattle were not good.

We have had from "the ingenious Mr. Marshall" a long list of the plans of knavish sheep breeders, "thirty-five or forty years ago." He might, no doubt, have given an elaborate and amusing account of the tricks of accomplished sheep stealers, if he had been so disposed: but, it would not bear upon Major Rudd, a gentleman of fortune, leisure, and zeal, who has pleasure in doing good; whose generosity may be apparent in allowing access to his males, or in giving away calves; whilst, as a man of business, he demands the value of that which, by the purchaser, is sought.*

His vanity, though humble, may be elated with his success as a farmer; and, after having rambled abroad, he may vaunt over the superiority of his ox or his cow, whilst his disregard of high employ, makes him happy in retirement, and tranquil if obscure.

Col. Mellish was a chivalrous soldier, regardless of his person and his purse, munificent in all his pursuits, so elevated by his position above all sordid calculation, and so far removed, by his fortune, from the desire of paltry gain, through the sale of a bull or a calf, that no man who knew him, or who could measure the habits of the persons amongst whom he moved, could suspect him of objects other than those of general improvement, connected with the advancement of his tenantry, or the interests of his country, which may stimulate a private gentleman or a farmer in his quiet path, with as much steadiness and force, as if he were struggling in the race for popularity, or contending for distinction among public men.

It was not necessary that Col. Pickering should remark, "no mere farmer in England can find his account in giving 450 dollars a piece for cows and heifers, to compose his dairy." In this, as in many of the opinions which this venerable gentleman has expressed, I most cordially agree; but, a "mere farmer" may find it profitable, in conjunction with his neighbours to purchase a bull for the use of their stock, and to employ two or three thorough bred cows, to take advantage of the demand, and to have the means of changing the stream, as it is called, of the blood. Thus, whilst his own stock is improved, his expenditures are returned by occasional sales, and by the perquisites received for the services of the male.

A large landholder may find it advantageous to purchase bulls and cows, to breed calves for the purposes of his tenantry, and, through their prosperity, to augment, ultimately, his own gain.

The improved short horns must be an extraordinary race, if some dozens of marquises, barons, baronets, and scores of country gentlemen, with the distinguished Mr. Curwen at their head, become "*professed breeders for profit.*"

John Bull, although not so acute, in our estimation, as brother Jonathan, that extraordinary being, whom I have always considered the most efficient and useful of the race, is not quite so stupid and absurd as to be humbugged upon the matter of his boast, "old English roast beef," by the tricks of noblemen and country gentlemen, who sacrifice thousands for his gratification, who pay millions for public improvement, whose wealth, consequence, and pride rest upon the prosperity of their tenantry, and the value and extent of their land.

I am, dear sir, most truly, yours,
JOHN HARE POWEL.

Extract from a communication, made by his Excellency Levi Lincoln, governor of Massachusetts—president of the Worcester county Agricultural Society.

(Memoirs Penn. Agricul. Society, p. 14.)

"Upon the subject of *Denton's* progeny, I should fear to write to any one less observing and sanguine than yourself. With nineteen of them, of different grades and ages, in my possession, I can safely say, that my most confident anticipations have been entirely answered. I have now seven heifers in milk, four of them 3 years, and three 2 years old; and for richness in quality and abundance in quantity, they are not excelled by the very best cows *of any age*, of the native stock. A heifer of 3 years, with her second calf, has not been dry since she dropped her first, having given four quarts on the morning of her second calving.

"Next to the Merino sheep, I consider the intro duction of the short horns, *in the blood of Denton*, as the richest acquisition to the country which agriculture has received. For the dairy and the stall I speak with the utmost confidence of their preeminence. From my three years old heifers I have calves of the most promising appearance, and greatly excelling any I have before seen. One of the heifers gives from 16 to 20 quarts of the richest milk, by the day, since calving; the other a little less, from the circumstance of having been in milk continually for more than a year; but her milk is in no degree inferior in quality. The last season she gave eleven quarts at a milking, with grass only, and this not unfrequently. They keep as easily as the native stock, and are as hardy. I have this year a three-fourths heifer calf from a half blood of Denton by *Admiral*, the famous bull sent out by Sir Isaac Coffin last year, to the Massachusetts Agricultural Society, and two others by the celebrated bull "*Cœlebs*" on Denton's half blood. They are fine promising animals, although in no respect superior to the *three-fourths* of Denton. I have no knowledge of the properties of this stock for labour, never having altered but one of the males. I can not, however, perceive any reason to doubt their value in this particular. Their form indicates great power, and they have much quietness and docility."

From Charles A. Barnitz, Esq.

York, Penn., May 23d, 1825

John Hare Powel, Esq.

Dear Sir,

Knowing the great interest you feel in all things relating to our stock of cattle, it gives me pleasure to inform you of the flattering prospects I have in the increasing excellence of the Improved Durham Short Horns, which were obtained last spring. Yorkshire was nine months, and Hebe fifteen months old, when they were procured; I have now had them one year, and their improvement in size and beauty surpasses every thing of the kind that has been known in this county. We have a rich valley, highly cultivated, extending through York county, and almost every farmer has one or two choice cows of the native stock, which he considers of a superior kind; but from all that I have seen in my own examination, (and I have taken pains in the matter,) as well, from what I hear, they fall far short of Hebe in beauty, size, shape, and other points of value. Early last summer I obtained from a neighbouring farmer a beautiful heifer of the native stock, of the finest shape and promise, and of the same age with Hebe. I kept them together upon the same feed until new year, when the difference was so great, that allowing for a small original difference in size, Hebe appeared at least two years ahead in improvement. Yorkshire is an uncommonly fine animal, and although not two years old, has the weight and size of the best common bulls at five years old. The great breadth and perfect symmetry of his frame is most extraordinary; his skin is covered with a coat of hair almost as fine as fur, and his fine handling shows an elasticity, which in the course of another year will advance him to the first rank of fine animals.

Our farmers, who generally know the leading points of good stock, have formed the highest opinion of this breed, and all agree on the great importance of extending them as rapidly as possible.—The great difficulty of obtaining them, and the high prices they command, will for some years retard the progress of the full blood; but even the half blood, which almost every farmer may obtain, must make a sensible improvement in the course of two or three years.

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* I do not deny, that some of the *professional* breeders, of England, whose names we hear, and whose short horns we see, are occasionally exorbitant, and often unfair.

The calves got by Yorkshire when he was only a year old, from common cows, indicate the great superiority of the breed in a remarkable degree. A heifer calf, got by him on a common cow, was lately sold for $20, when common calves of the same age and best appearance, will not command five dollars.

I hope, my dear sir, your exertions to promote the improvement of our farm stocks, may be rewarded as well in value as in what I know to be much more gratifying to you, the satisfaction of contributing so largely to the substantial wealth and comfort of your fellow citizens.

I am, very respectfully,
Your obedient serv't,
CHAS. A. BARNITZ.

—

Extract from the letter from Mr. Harvey, a *professed breeder of Hereford cattle,* acknowledging "*the superiority of Short Horns over all others,* and *that the Herefords* stood second."

To the Editor of the British Farmers' Chronicle.

Sir, *Alburgh, Dec.* 21, 1824.

It having appeared in several papers that I had the honour to gain three prizes at the late Smithfield cattle show, I beg you will have the goodness to contradict it; for I assure you, the superiority of the short-horned cattle over all others, was most conspicuous. The Herefords stood second, &c.

Signed, ROB. C. HARVEY.

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Extract from the "British Farmers' Chronicle," 27th December, 1824.

"Sir Charles Morgan's Cattle Show.—This exhibition took place on the 21st inst. Notwithstanding the unfavourable state of the weather, the increasing importance of the meeting, and, on the present occasion, the intense curiosity which was universally entertained, to learn the result of the long pending contest for usefulness and excellence, between the Improved Short Horns and Herefords, promoted an assemblage of agriculturists more numerous than had been witnessed on any former occasion. Twice had this question been already contested; in the first year, favourably to the short horns; in the second, no decision had been made, and curiosity was raised to the highest pitch respecting this, the third.

"Premiums were awarded for the best bulls and heifers of the North Devon, Short Horn, Hereford and Glamorganshire breeds. A sweepstakes for the best bull of any breed, 'intended to *bring all the previous winners* together,' was most numerously contested, and was won by the Rev. *H. Berry's improved short horn bull* Wharfdale, sixteen months old, by Mr. Bates' Enchanter and Mr. Whitaker's Miranda beating the field.'

"The sweepstakes of ten guineas each, five subscribers, for the best yearling heifer, was won by Mr. Champion's *improved short horn* heifer, aged 17 months, beating the Hereford heifer aged 20 months.

"Mr. Champion's heifer measured in girth behind the fore legs 6 feet 7 inches; in length from the fore upper corner of the shoulder blade-bone to the hindmost point of the rump, 5 feet. The given weight by this admeasurement, is 52 stones of 14 lbs. to the stone, (728 lbs.) Mr. White's heifer measured in the same way, in girth 6 feet 1 inch; in length 5 feet; and by a similar calculation, her given weight was 45 stones, (630 lbs.) From the foregoing statement, it appears that Mr. Champion's heifer nearly averaged 43 lbs. per month, and Mr. White's heifer nearly 32 lbs. per month." Difference in favour of the *short horn* heifer more than *one-third.*

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From E. Wolcott, Esq., a skilful practical farmer, who resides IN THE DISTRICT *wherein the Devons of imported blood are well known.*

East Windsor, Conn., June 17, 1825.

Since my return from my very agreeable journey to the south, I have made particular inquiry respecting four remarkable oxen which have been fattened on this part of the country. The first, was the Connecticut ox, which was slaughtered in Boston in the year 1809. He was bred by Mr. E. Wolcott, and fattened by Mr. Aaron Bissell, both of this town. His colour was *mostly white,* with black or dark brown spots on his neck, shoulders and sides. He was a beautiful animal, and resembled more the Improved Short Horn breed than any ox I have ever seen. He was kept several months in Boston for exhibition, during which time he is supposed to have lost considerably in weight. When killed, his round weight was 2188 lbs.

Mr. Wolcott, who bred him, informs me that his grandsire was an imported bull, but he does not know of what breed. Since the period mentioned above, Col. Abel Chapin, of Springfield, Massachusetts, has bred and fattened three extraordinary oxen. I have not been able to ascertain their precise weights. Two of them were larger than the Connecticut ox, but neither of them of equal symmetry. All of these, as Col. Chapin informed me, descended from the bull *imported by Mr. Gore.* These facts, I think, sir, go to show, that "the FINEST CATTLE" of New England have been derived from bulls of recent importation.

With regard to the cattle of our country called "*native,*" I believe the best are to be found in the vallies of the New England rivers, and in the western parts of the state of New York. These have been familiar to me for many years. I have seen the imported Devons, *both in Connecticut and Maryland,* and have never had but one opinion of them, which is, *that they are inferior to our native stock.*

In January last, I journeyed to Vermont, and saw the descendants of the Holstein (Short Horns,) cattle, imported by Wm. Jarvis, Esq., about fourteen years ago. Satisfied of the excellence of this stock, I purchased of Mr. Jarvis a few heifers. In March, I travelled into Massachusetts, and saw the imported bulls Denton, Cœlebs, and Admiral, of the Improved Durham Short Horn breed, and many of their progeny. Recently I have seen more of the same breed in your possession, and in Baltimore; and should think no lover of fine cattle could see them, without acknowledging their excellence.—How fully I am persuaded of their superiority over any other breed of neat cattle, you may well know by the price I paid for a young male of pure blood.

With sentiments of much respect and esteem, I am, sir, your most obed't humble serv't,

(Signed) E. WOLCOTT.

John Hare Powel, Esq.,
Corres. Sec'ry of the Penn. Agric. Soc'y.

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Extract from a letter from one of the oldest breeders in England—Yorkshire, March 25, 1825.

"I have declined breeding, &c. I have nothing left worth your notice. The best Short Horns are all true in their form, and well *calculated for the yoke,* their step being *firm and good.*"

Improved Short Horns are of various sizes; weight is not always determined, by *the height* and circumference of the animal, especially when in a lean state. Compactness of form accompanied by *length,* of the hind, and depth of the fore quarters, with the property of carrying *flesh* without, as well as fat, or "proof" within, causes both Improved Short Horns, and Improved Herefords, to arrive at great weights, although when in "store condition," they appear comparatively small.

—

Philadelphia county—Turnpike Scales Gate No. 1, *December* 27, 1824.

Mr. Powel's bull calf weighs this day when 10 months, 12 days old, - - - - -	1,022 lbs.
Cow 4 years old, - - - - -	1,610 "
" Virginia 6 years old, - - -	1,309 "
Bull calf, Defiance, weighs this day, (January 28,) when 6 mo. 20 days old,	665 "
Heifer, Coquette, 11½ months, - -	798 "
Cow 6 years old, - - - - -	1,648 "

Dimensions given to prove that animals which are not large, weigh heavily when well formed:—

Virginia, 6 years old:

From the root of the horns to the extreme end of the rump, - - - - -	6 ft. 2½ in.
From the top of the shoulder to the ground, - - - - - -	4 " 3½ "
From the bottom of the belly to the ground, - - - - - -	1 " 9½ "

This cow is not larger than many of the native cows of Pennsylvania. Mr. Curwen states, that his stock from which she is derived, are comparatively "diminutive;" yet when in merely store condition, she weighed 1309 pounds.

Defiance, 6 mo. 20 days old.

From the top of the shoulder to the ground, - - - - - -	3 ft. 6¾ in.
From the brisket to the ground, -	1 " 8¼ "
From the horns to the extreme end of the rump, - - - - - -	5 " 1½ "
From the shoulder to the root of the horns, - - - - - -	1 " 2½ "
Circumference immediately behind the fore legs, - - - - -	4 " 10 "
Diameter of bone under his knee, - -	2 "

This calf had not been forced. It is not his mere weight, but the smallness of offal, and his weight in proportion to his size, which are worthy of remark. Skin, bone, and fat, are often found without the due proportion of flesh.

Lady, 3 years.

Across the hips, - - - - -	2 ft. 1¾ in.
Across the end of the rump, -	1 " 4½ "
From the root of the horns to the end of the rump, - - - - -	7 " 4¾ "
From the hip to the same point, -	1 " 9¼ "
From the root of the horn to the shoulder, - - - - - -	1 9 "
Diameter of the bone under the knee,	2⅓ "

This is a very large cow of her age. Her weight has not been ascertained.

The other cows, whose weights are given, had *been reduced* during the early part of the winter, in order that they might calve safely.

The foregoing weights and dimensions, were ascertained in my presence. I have traced the ages of the animals bred at Powelton, by reference to the Fold-Book. JOHN P. MILNOR.

Improved Short Horns are not "*a stock entirely new;*" some of them can be traced, without a flaw in the pedigree, by the names, to 1777. (See Herd Book p. 68.)

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From a pamphlet entitled "Improved Short Horns, and their pretensions," by the Rev. Mr. Berry, Liverpool, 1824.

To the banks of the river Tees, separating the counties of Durham and York, reference is to be had for an account of the originals of the Improved Short Horns. There upwards of *eighty years* ago, existed a breed of cattle, (for a description of which the author is indebted to an old and celebrated breeder now living,) in colour resembling what is called the improved breed of the present day.

From all the information which can be collected, it appears that the breed of cattle thus described, was crossed with, and probably improved by importations from the continent.

Several spirited individuals at that early period, had devoted much attention to the improvement of the breed of cattle in the counties of Durham and York, and amongst others, Sir William St. Quintin, of Scampston, imported cows and bulls from Holland. In due time the produce of these animals was more widely diffused and crossed with the best stocks of the country, which possessed the same characteristics, became distinguished as the Teeswater Short Horns, uniting in a wonderful degree good grazing and *dairy qualities.* (See Bailey's Survey of Durham.)

Thus much for the Teeswater cattle, the originals of the Improved Short Horns. From this breed Mr. Charles Colling selected his original stock.

The milking properties having been established by the instances given from Mr. Whitaker's stock, it but remains to be shewn, that as grazing stock, the Improved Short Horns are unequalled. But a very few cases shall be selected of the great number which could be adduced:

1822.	An ox 4½ years old, four quarters weighed	1890 *lbs.*
	Tallow,	350
		2240
1816.	A steer 20 mo. old, four quarters,	861
	Tallow,	106
		967
1817.	A steer 3 years, 3 mo. old, four qrs.	1484
	Tallow,	168
		1652
1822.	A steer, 3 years old, four quarters,	1498
	Tallow,	210
		1708
[illegible]	A steer, 2 years old, four quarters,	1156
	Tallow,	179
		1335

Sir Charles Morgan's 4 years old ox, by Furioso, four quarters weighed 2058 lbs.

Major Rudd, of Marton, obtained the premium offered by the Cleveland Agricultural Society, in 1811, for the best steer under three years old, *fed on vegetable food, meaning hay, grass, or roots.* The weight of his four quarters, when 3 years and 13 days old, the time he was slaughtered, 1344 lbs.

A 6 years old ox, bred by Sir Rowland Wynne, slaughtered in 1808, weighed . . . . 2366 lbs.
Tallow, . . 375
2741

Rufus, a bull bred by Mr. Hutchinson, after serving in his fourth season the extraordinary number of 150 cows, was slaughtered, having been fed four months—his four quarters weighed . . 1,708 *lbs.*
Tallow, ... 168
1,876

Mr. Champion's bull Aid-de-camp, weighed alive, when 22 months old, ... 1851 *lbs.*

Miss Points,* by Aid-de-camp, bred by Mr. Champion, when 17 months old, if killed, her quarters would have weighed, according to the rule established at the Tredegar Show, ... 728 *lbs.*

NATURE AND REASON HARMONIZED IN THE PRACTICE OF HUSBANDRY.

By the late John Lorain.

[To recommend more effectually the work noticed in No. 7, entitled "Nature and Reason Harmonized," we now extract another article "on barns, cattle sheds, barracks, and hay savers. On the different ways by which cattle are fed and sheltered through the winter." The whole work contains 563 pages, written with uncommon practical ability, on agricultural subjects of the greatest importance.]

BOOK III.—CHAPTER XXXV.

On barns, cattle sheds, barracks, and hay savers. On the different ways by which cattle are fed and sheltered through the winter.

Enough has been already said on expensive barns and dwelling houses. The best mode of forming and conducting cattle yards, has been also explained.

A small barn is necessary, for threshing and various other purposes. It costs but little labour or money to erect a barn without the aid of a nail, or a particle of iron, where timber is a drug, if light round timber be selected for the logs that form the walls.—This course, therefore, should be invariably pursued in recent settlements, where labour, as well as money, is scarce. If such barns be properly constructed, with durable wood, they will last a long time; provided the building be set high enough from the ground, and be underpinned with a wall of stone, which is readily laid by any man, without mortar. If the underpinning, however, be not sunk to a solid foundation, the house will sink, and the undermost logs rot in a very short time. This is the reason why log houses are reprobated. They are generally set on blocks of wood. These sink, and soon hasten into decay. The house sinks with them, and the undermost logs, sleepers, and floor, soon share the same fate. When this happens, the farmer says a log house is good for nothing, although the fault lies in him, and not in the house. I am now living in a log house, built with white pine, about twenty-four years ago. It was set on blocks, and not far from the ground. The first logs, sleepers, &c. were so much decayed, that I was obliged to remove the logs, and put others in their place. The remainder of the house is perfectly sound, and seems as if it might last a very long time. Now I do not know a single house, but one, built in the settlement, previously to my removal to it, which was not set on blocks of wood—of consequence, the under parts of most of them are now rotten.

Barns are so generally well constructed in our older settlements, that it would be superfluous to suggest any improvement in them. The useless ornaments and expensive materials, however, which have been introduced by some gentlemen, ought to be avoided by all who wish to establish the simple principles of genuine rural economy. The farmer's pride should rest in the display of luxuriant crops, obtained with the least possible expense: especially, if he be very rich, as his example might go very far towards turning the tide of vanity into its proper channel.

Barracks, when properly constructed, preserve either hay or grain quite as well as barns, and the latter much better, so far as the depredations committed by rats and mice are concerned. Some gentlemen believe that grain is not so subject to become mouldy, or otherwise damaged, even in stacks, if they be well thatched, as it is in barns. They say the superfluous moisture escapes more freely from the former. Be this, however, as it may, it is evident that both hay and grain may be very advantageously and safely kept in barracks, if they be properly constructed and well thatched.

When the roof is made to slide up and down, it leaks at the corners, and without great care is soon wrecked to pieces. When the posts stand in the ground they rot too soon. If morticed into sills, the water gets into the mortice and produces speedy decay. They are much more lasting when the posts stand on broad stones, thick enough to project six or eight inches above the ground, after being sunk deep enough into it to lie on a solid foundation.

I have had them made thirty-six feet long, twenty feet wide, and twenty-two feet high, measuring up to the top of the upper plate. These require four posts on each side, set twelve feet apart. They are morticed into the two side plates: four joists extend across the top of the barrack, directly over the tops of the posts. These are notched, so as to let in the plates. Those at the ends answer in the place of plates. The posts are bound together by plates morticed into them, about ten feet below the upper plates, along the sides and across the ends of the barrack, and also from post to post across the interior of it, at the same distance below the upper plate. Two braces extend from each post, up to the upper plates, and to the upper joist that extends across the ends, and one brace is extended from each post to the joist which extends across the top of the interior part of the barrack. The same number of braces are extended from the posts up to the lower plates and joist, which bind the sides, end, and middle of the barrack together.—The braces are dovetailed into the posts, plates, &c. and spiked fast into them; as the labour is less than if they were morticed and tenoned. It was also thought that the water would be less subject to lodge, and they would be less liable to rot when put up in this way. The pitch of the roof is formed to close the ends, as the winds will affect the top of the barrack much less than if the gable ends were boarded up. The roof is thatched with rye or wheat straw. If this be properly done, it will last a long time, and be very valuable for littering the cattle yard when a new cover becomes necessary. Any farmer who can handle common tools will soon erect such a barrack from the stump. But where timber is valuable, it should be all sawed.

A barrack of this size will store twenty tons of hay, or perhaps more. In a well settled mow, when not so high as this, eight feet square, or five hundred and twelve cubic feet, will weigh a ton. It will require more cubic feet, at and near the top of the mow, to weigh a ton, but less are found sufficient at or near the bottom. The bottom may be formed of any kind of poles, split timber or boards. It should, however, be raised a little distance from the ground, either by stones or timber. This will permit the moisture arising from the earth to escape. If this be confined, it will damage the bottom of the mow: it will also admit the cats to pass underneath it.

If the barrack is intended for storing grain, the farmer should extend very strong joists across it, from post to post, two and a half feet above the level of the ground. The post ought to be capped just below the joists, in the way that will be described when the proper construction of a corn crib is explained. If this be properly done, no rat or mouse can get in among the grain unless carelessness furnish the means for them to climb up into it. As the joists will be few, they ought to be let into the posts, so that the ends may have a bearing on the solid wood, otherwise the weight of the grain would break off the tenons.

Some English farmers exclude mice and rats from their grain stacks by erecting them on foundations or pillars made of cast iron, stone, or wood work properly capped: still, they have not been able to exclude them from their barns. The frequent intercourse of labourers renders it impossible to guard the doors so that these intruders cannot find an opportunity to enter. After they get in, the contents stored in the building seldom fail to furnish them with food and a secure retreat. The patient vigilance of the cat, however, will pursue and destroy them, if that animal be properly managed.

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* Note.—This heifer has been purchased by Mr. Powel, and will cost $700 by the time she gets here in November.—Ed. Am. Farmer.

When hay or grain is put into the barrack, the first twelve feet between the posts should be first filled quite up to the top of it. After this the second and then the third divisions between the posts ought to be filled up in the same way. If the whole extent be regularly filled, damage may arise from driving rains before the barrack is filled; and the joists running across the interior of it will hinder the hay or grain from settling properly. The hay should be removed by cutting a small portion of it regularly from the top to the bottom, beginning at one end of the barrack. The grain should also be taken out by hand in the same way, or damage may happen from driving rains or snows. If attention be given when the grain is put into the barrack, it may be readily mowed so as to favour the proper removal of it. If the wagon cover be spread in the bed of the wagon when the grain is removed to the threshing floor but little will be lost if it be carefully loaded.

When labourers are scarce, or the weather is dripping, it is often found difficult to get the hay and grain hauled from distant fields and secured in time: therefore, serious losses sometimes arise from these causes alone. The extra wages and liquors during harvest also increase the expense of a distant removal of the hay and grain. We, likewise, too often hear of extensive losses arising from fire being communicated in various ways to the combustible substances in and about the barns.

It would seem that if barracks were erected on such different parts of the farm as would generally most favour the inning of the hay and grain, the time of harvest would be considerably shortened, and the risk from wet weather greatly abridged. The whole of the produce would not be subjected to one sweeping loss if fire should happen to take place. Be this, however, as it may, I can safely advise the farmer to place his barn yard establishment so far distant from his dwelling that if the one should take fire the other in all probability might be saved.

Here I beg to observe, that I have thought forming the barrack only sixteen feet high to the top of the upper plate would be a better plan than that adopted by me. One set of longer braces without any plates along the sides and ends or across the middle of the barrack would in this case be sufficient. The labour would be considerably abridged, and less injury from decay, as fewer places would be formed for water to lodge in. Those for storing grain might in this case be nineteen feet up to the top of the plate, as the joists running across them two feet and a half above the level of the ground would greatly strengthen the lower parts of them.

Cattle and horses may be kept tied up in close stables without any apparent injury to them, provided the stalls be kept very clean. Doing this, however, together with keeping the stalls well littered and taking the animals to and from water, is tedious and laborious if it be properly done: especially as when they are confined they are compelled to lie down in their dung. It therefore requires much more labour to keep them clean than when they are suffered to run at large in well littered yards, and have open and well littered sheds provided to screen them from the weather. Some farmers and graziers say that cattle do best when no shelter is provided for them; but of this I am very doubtful. It may, however, answer tolerably well when cattle have been accustomed to it, provided they are suffered to seek shelter for themselves in thickets, &c.: but by this practice the manure is lost. My cattle were injured by keeping them a part of one winter without shelter; but, as I wished to save their dung, they had no opportunity of seeking shelter for themselves.

Wagoners who travel on the roads will not stable their horses even where it might be done without extra expense. They are hitched to the wagon, and fed and kept there through the most inclement nights, after being heated by the labour of the day: yet, if they be well fed and otherwise properly attended we do not perceive that they are injured by this practice: still, as every animal when at liberty seeks shelter from the inclemency of the weather, it would seem that the wagoner's practice is not well calculated to promote the health and prosperity of his team, unless it be, that by exposing them uniformly they do not suffer so much as they would do by being occasionally exposed. It therefore appears probable that the middle course between this practice and that of fastening up the animal in a close stable ought to be pursued. The generally prevailing opinion among Pennsylvania farmers, is, that close, warm stables are best.

There are, however, gentlemen of the first agricultural talents who let their best horses run at large in yards where they may at pleasure retire under the shelter of proper sheds, provided for that purpose. These gentlemen believe that the health and vigour of their horses are greatly promoted by this practice. We all know that men whose business confines them much to the house, though it may be laborious, are not generally any thing like as healthy as those who are commonly exposed to the open air. It would also seem, that nature never intended that cattle and horses should be kept closely confined in warm stables.

Sheds are erected with little labour and expense. The back of them forms the cattle yard fence as far as they extend. If the posts be lasting the remainder of the timber may be of almost any kind of scantling or even poles. Sound half price boards will be good enough for the backs and ends of the sheds. I have seen even slabs very advantageously used for this purpose. The roof may be thatched, but unless the eaves be raised rather too high the cattle are apt to pull down the thatch. It is therefore best to extend a broad board lengthwise the eaves of the roof, or two narrower ones to lap, so as to run off the rains and to thatch the rest of the roof. When good thatches cannot be had, thin sound white pine boards will make a lasting and cheap covering for the barracks and sheds.

In my observations on soiling I have described how the floors of the sheds should be formed.

When cattle are kept through the night in stables and fed through the day in yards where no shelter is provided for them, moveable hay savers should be formed with a view to spread the rich manure over the yard, and also to save the hay from waste. Those savers should be four and a half feet wide, the length not exceeding ten or eleven feet. If longer, they will be unhandy to remove. If shorter, corn fodder cut off by the ground cannot be well put into them. The posts ought to be four feet three inches long to form the four corners of the saver. These are to stand erect, and to be united by rails framed into them at the sides and ends. Two rails high all round will be sufficient for holding the hay, provided the top of the uppermost rail be two feet above the ground. The rails should be wide enough to prevent the cattle or horses from pulling out the hay from the vacancy left between them, or from the space left between the bottom rail and the ground.

To prevent the cattle from getting into the savers, rails should be framed in all round, near to the top of the posts, so as to leave eighteen inches between the rails below. This will be wide enough for underlings to extricate their horns speedily when in danger of being injured by their superiors. The whole construction should be light, but strong enough to withstand the exertions of the cattle when contending with each other. A bottom is not requisite, as a little clean straw spread upon the ground when the saver is removed to a fresh spot will be sufficient.

In these, cattle eat immediately over their food without waste. Racks, like many other inventions connected with farming, have been generally used from time immemorial, although they do not possess a single advantage. They are costly; and if the rounds are barely wide enough apart for cattle to get out the hay, much of it will be pulled down and trampled under their feet. They compel the cattle to assume an unnatural posture for feeding, even when the front of the rack is vertical. Grazing teaches us the natural posture for cattle and horses to feed at ease to themselves.

This is obtained by using hay savers. Their eyes and nostrils are not affected by the seed and other small particles of the hay, or from the dust and sand, or other injurious substances that may be contained in it. They can readily pick out the hay without being annoyed by briars, weeds, and other substances offensive to their feeling or taste.

In stables and under sheds hay savers may be about twenty-seven inches wide. If the floor of the stable be made of wood it may constitute the bottom, if the seams be tight enough to hold short or chopped food. Boards six inches wide may form the front and back; above this, railing will suffice.

By this very economical and expeditious mode of feeding either cattle or horses, the saving in hay is much greater than can be readily imagined by those who have not been in the practice of using savers.

If racks be considered necessary, the saving in the hay will be the same if savers be constructed under them in the stables, and around those in the yards. The latter, with the racks, may be readily constructed so as to be moveable. If a light covering of boards be attached to the savers the hay in the yards will not be injured by rain.

It was soiling that first suggested the idea of hay savers to me. I found that the cattle quickly pulled down under their feet the grass fed to them in the same racks that were used for feeding hay to them. It seems, the grass while green is much more slippery than when it is dried into hay.

To prevent this great waste, posts that had been rotted off by the ground were sunk into the earth at proper distances from the four corners of the rack standing in the yards, and common rails inserted in two holes left in each post above the ground for that purpose. As these savers remained until feeding with hay commenced, it was soon observed that the saving in that article by the means of this simple and very cheap contrivance was amazingly great. The horses and cattle ate the hay which they pulled down into the savers as readily as that remaining in the racks. Since that time the savers without the racks have been preferred by me.

Worn out posts, if broad rails be selected, will make the cheapest savers for the sheds, and answer the purpose equally as well as if they had cost the farmer much more labour and money, provided dry fodder or grass alone be fed to the cattle where they are used.

ON THE USE OF FLAX-SEED FOR FATTENING CATTLE.

[It is known that flax-seed possesses fattening properties in a very eminent measure, so of the oil seed-cake and the *cleanings* of flax-seed which are nearly, if not quite, *given away*, are very valuable when made into a jelly and mixed with bran, cut straw, &c. It is desirable to know how these things are best prepared, as practised in England where they are much used; and hence, we make the following extracts from late English papers.]

ON FEEDING WITH LINSEED.

To the Editor of the Farmers' Journal.

Dec. 18, 1824.

Sir,

Should your correspondent *Sigma* (in your paper of the 6th Dec.) be disposed to avail himself of my experience, as to feeding with linseed, it is much at his service.

On four quarts of linseed pour eight gallons of *boiling* water: let it remain forty-eight hours; then boil the whole two hours, taking care, by keeping it stirred, that it does not burn. This will produce a thick jelly, which may be given at the rate of three or four quarts per day to each beast, mixed up with chaff or cut hay alone. If a table-spoonful of salt be added to each meal, the beast will eat it with greater avidity. It will be necessary with this, as with oil-cake, to begin with a very small quantity of jelly to the chaff; and even then, perhaps, the beast must be kept from other food for some time to make him take to it.

In making your estimate of the expense, even if you reckon linseed at 50s. a sack, you will find it less than to feed on oil-cake; and by this plan you will get the whole virtue of the seed: but if you feed with cake, you have little more than the refuse, the mere husk; and I cannot but think that feeding with the oil must be *excessively* relaxing, and therefore impede the fattening of the animals.

Most likely, your agricultural readers are aware of the use of linseed jelly in rearing calves by hand, to save milk.

Your insertion of this will oblige your obedient servant,

PRACTICUS.

P. S. Has any correspondent given the oil a trial? If so, what has been the effect; and what is the comparative expense?

QUERY ON FEEDING WITH LINSEED.

To the Editor of the Farmers' Journal.

Sir, *Dec.* 1824.

If any of your correspondents have been in the habit of giving linseed to stall-fed bullocks, I shall feel obliged by their stating the quantity given daily to an ox of forty score; the manner of preparing the seed; *i. e.* whether crushed, or used in a liquid state, either by itself, or mixed with chaff or corn; its value as compared with oil-cake, and its general effects in advancing the condition of the animal.

Also, the kinds of soil on which the Kho' Rabi thrives most; the culture necessary before and after sowing; the quantity of seed per statute acre; the time when it is consumed, and by what animals; and its value as compared with Swedish and other turnips.

I am, sir, your most obedient servant,

HENRY BARKER.

Agriculture.—It appears by a topographical survey taken in the years 1769 and 1770, that the total quantity of land appropriated to husbandry in England, was, at that time, 32,000,000 of acres, viz. 13,518,716 in tillage; 15,736,185 in grass; 2,395,721 in woods; and 349,387 in ponds, lanes, yards, &c.; which thirty-two millions of acres were let in 570,040 farms, producing an annual rental of 22,400,000*l.*, an average of fourteen shillings per acre per annum, and stocked with 694,491 head of draught cattle, 22,188,948 sheep, 741,532 cows, 513,369 fattening beasts, 912,656 young cattle, 1,711,200 pigs, and 2,161,300 head of various kinds of poultry; the whole amounting, per estimate, to 39,686,237*l.* The value of the soil, estimated at 18½ years purchase, was 705,600,000*l.*

SUPERIOR MERINO RAM.

Middletown, Con. June 8.

On Wednesday last, Mr. Wedsworth Wadsworth, of Durham, exhibited in this city his celebrated Merino Ram. This remarkable animal is only six years old, weighs 140 lbs., has never been sheared, and possesses the peculiar characteristic of the Merino breed, of never shedding its wool. The length of his fleece, by actual measurement is 17 inches, and its weight is estimated, by competent judges, from 30 to 40 lbs. For fineness of texture, length of staple, and beauty of appearance, it is believed it has never been surpassed by any single fleece in the country. This animal enjoys perfect health, and, it is said, does not suffer from the changes or extremes of climate. He obtained the premium in this county three years ago. The distinguished agriculturist and friend of domestic improvement, who is the owner of this animal, and has done so much to improve the breed of sheep in this county, has been induced to rear it without shearing, for the purpose of ascertaining whether it would shed its wool or not. The extraordinary length and weight of its fleece, settles the question beyond controversy, and proves the decided superiority of the Merino over every other description of sheep.

BOTANY.

PINNOCK'S CATECHISM OF BOTANY.

(*Continued from page* 126.)

CHAPTER XIX.

Class XIII.—*Polyandria.* (Stamens numerous and indefinite.)

SEVEN ORDERS.

Q. What examples will you give me in this class?

A. The poppy and the tea-tree; the former being the plant from which opium and laudanum are produced; and the latter affording us a beverage, which is now drank by all classes in this country.

Q. From what part of the plant is opium produced?

A. From the seed vessels, in which several gashes are made, and a milky fluid exudes, which, when it attains sufficient consistence, is formed into balls or cakes, and is of a dark brown colour. Its uses in medicine, to cause sleep and alleviate pain, are well known. Laudanum is a liquid preparation from opium and spirits of wine, and is used for the same purposes.

Q. Describe the tea-tree.

A. The tea-tree is an evergreen shrub, about five or six feet high, and much branched; a native of China and Japan. It flourishes with great luxuriance in vallies, on the sloping sides of hills, and on the banks of rivers. The leaves are narrow and tapering; the flowers not much unlike those of the wild rose, but smaller; and are succeeded by a fruit about the size of a sloe, containing two or three seeds. It is chiefly cultivated in the mildest and most temperate parts of China.*

CHAPTER XX.

Class XIV.—*Didynamia.* (Four Stamens, two long and two short.)

TWO ORDERS.

Q. What sort of plants are comprehended in this class?

A. Many which are distinguished by us as garden herbs, and valued for their odoriferous smell and kitchen uses, as well as for the medicinal qualities which some of them possess.

Q. Mention one as an example.

A. Common or spear mint (*Mentha viridis,*) one of our most common garden herbs; is a native British plant, and grows wild in watery places, and near the banks of rivers, in several parts of England. Its flavour is, to many persons, peculiarly agreeable; and, on this account, it is preferred for many culinary purposes. The leaves are used in spring salads, are boiled with peas, &c. and, mixed with vinegar, form a sauce for lamb.

CHAPTER XXI.

Class XV.—*Tetradynamia.* (Six Stamens, four long and two short.)

TWO ORDERS.

Q. What kind of plants compose this class?

A. The plants in this class are all eatable, and generally supposed to possess anti-scorbutic qualities. In it we find the cabbage, the turnip, the water-cress, and mustard, with a variety of wild plants and flowers.

Q. Give me a description of mustard.

A. Common mustard is made from the powdered seeds of a plant (*Sinapis nigra,*) which grows wild in corn fields, and by road sides, in most parts of England; and is known by its yellow cruciform flowers, with expanding calyx, and its pods being smooth, square, and close to the stem.

Q. Is it not cultivated by us?

A. Yes; in light lands it is cultivated to great advantage, particularly in the county of Durham, and that which is produced there is considered the best.

Q. What are its uses?

A. Mustard is in daily use at our tables, and the seeds are used in pickles. Preparations from mustard are also often employed in medicine, both internally and externally.

"Mark how kind Nature, friend to sweet repose,
Unites with Art, to soothe our racking woes."

CHAPTER XXII.

Class XVI.—*Monadelphia.* (All the Filaments united at the bottom, but separate at the top.)

EIGHT ORDERS.

Q. Give me an example in this class.

A. I know of none more interesting or useful than the cotton plant, which is cultivated in the East and West Indies, and numerous other hot countries. It grows to a considerable height, and has leaves of a bright green colour, with flowers of only one petal, of a pale yellow colour, with five red spots at the bottom. The seed-vessels, or cotton pods, contain a soft vegetable down, which envelopes the seeds.

Q. Is not the cloth we call cotton made from this down?

A. Yes; after being gathered, and carefully separated from the seeds, it is packed in bags and imported into this country. Here it undergoes the processes of carding, spinning, and weaving, which were formerly performed by hand, but is now, for the sake of expedition, effected by machinery.

CHAPTER XXIII.

Class XVII.—*Diadelphia.* (Filaments united in two Sets.)

FOUR ORDERS.

Q. What examples can you furnish me with under the head Diadelphia?

A. Many plants well known to us are comprehended in it; such as peas, beans, vetches, clover, lucern, broom, furze, &c.; but a description of one of them I imagine will be sufficient; they are called papilionaceous.

Q. Well, then, describe the broom.

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* The tea is gathered at three separate times: the tenderest leaves, of but a few days growth, are gathered in February or March; the second gathering is in April; and the third in June, when the leaves are full grown. The tea is afterwards prepared by drying it in a stove in shallow iron pans; and the supposition of its ever being dried on copper, to give a more beautiful green to the leaves, seems to be entirely void of foundation. Tea was first introduced into Europe by the Dutch East India Company, in 1641, and a small quantity was brought to England from Holland about the year 1666; it was for many years after only drank by people of quality, but during the last century it became general.

A. The common broom is a shrub seen on sandy heaths in most parts of England; it has large yellow butterfly shaped flowers, with leaves in threes, and the branches are without prickles. This shrub is distinguished from furze, which consists of a cup with two leaves, and is still more common here than broom, though in other countries it is quite scarce.

Q. What curious sensitive plant belongs to the class Diadelphia?

A. The plant you allude to is called *Sensitive Hedysarum;* it is a native of Bengal, and may be considered as one of the most extraordinary plants in the vegetable world. When the air is very warm, and quite still, its leaves are in continual motion, some rising, others falling, and others turning round by twisting their stems: the cause of these phenomena is not at all accounted for.[*]

Q. What kind of plant is it in appearance?

A. It grows about three feet high; the leaves are of a bright green; and the flowers of a pale red, slightly tinged with blue or yellow.

CHAPTER XXIV.

CLASS XVIII.—*Polyadelphia.* (The Filaments united, making many Sets.)

THREE ORDERS.

Q. What description of plants are arranged in this class?

A. Several foreign fruit trees, such as the orange, the lemon, the citron, and the cocoa nut trees.

Q. Describe the orange and lemon trees.

A. The orange and lemon shrubs are evergreen plants; the latter has large and slightly indented shining leaves, of somewhat oval shape, but pointed; the flowers are large and white, but of a purplish hue on the outside of the petals. The orange tree is distinguished from the lemon, by having a kind of winged appendage on the leaf stalks, of which the latter is destitute.

Q. What properties does the fruit of these trees possess?

A. Oranges, when ripe, are extremely sweet, grateful and wholesome. In fevers. and other complaints, they are very serviceable in allaying heat and quenching thirst. The juice of lemons is sharp and agreeable, and is used in cookery, confectionary, medicine, and various other ways. The rind is also used in cookery and confectionary, and is valued for its aromatic and bitter taste.[†]

CHAPTER XXV.

CLASS XIX.—*Syngenesia.* (Stamens united by Antheræ; Flowers compound.)

FIVE ORDERS.

Q. Describe some plant under the class Syngenesia.

A. As I mentioned the daisy and dandelion as examples of this class, in the fifth chapter, I will describe the one you prefer.

Q. Then I think the beauty of the humble daisy justly entitles it to my preference.

A. The daisy, which so delightfully enamels every meadow, will not be disregarded by the botanist if taken separately; for there is much beauty and variety discernible in this little flower. The calyx is formed of a double row of spear-shaped leaves; the numerous tubular florets in the centre are yellow, and furnished with both stamens and pistils, while those composing the ray, which are white above, and pink beneath, contain pistils only. The receptacle is naked and conical, and a naked stalk supports a single flower.

CHAPTER XXVI.

CLASS XX.—*Gynandria.* (Stamens situated on the Pistils.)

NINE ORDERS.

Q. What plants are comprised in this class?

A. Several well known field plants of the orchis tribe.

Q. Describe them generally.

A. They have an oblong withered germ, below the flower, which has no proper calyx, but only sheaths; the corolla consists of five petals, the two innermost of which usually join to form an arch or helmet over the top of the flower. In some species the root is composed of a pair of solid bulbs; in others it consists of a set of oblong fleshy substances, tapering towards the ends.

Q. Does not that beautiful and scarce flower, called the ladies' slipper, belong to this class?

A. Yes; and the ladies' slipper may be considered as the most handsome of any of the orchis plants in this country, and as it is one of the scarcest flowers we have, is always sold at a very high price. It may be found in its wild state in some unfrequented woods in the north of England.

CHAPTER XXVII.

CLASS XXI.—*Monœcia.* (Stamens and Pistils in separate flowers, but upon the same plant.)

TEN ORDERS.

Q. Mention some of the plants comprised in this class.

A. There are a variety of trees and plants, both native and foreign, that belong to it. Among those of native growth may be reckoned the oak, birch, alder, beech, walnut, sweet chestnut, fir, hazel nut, filbert, and mulberry trees; and the numerous kinds of sedges. In the list of foreign plants may be noticed, the bread-fruit tree, the cork tree, the cocoanut tree, the tallow tree, maize or Indian corn, and many others.

Q. Give an example of one of the most interesting among those of British growth.

A. That is the oak, which is a well known timber tree, invaluable to us, for to it the British navy is indebted for its existence. Until the introduction of mahogany, oak timber was very generally used for furniture, but it is now chiefly consumed in ship building. The tree is remarkable for the slowness of its growth, for its great longevity, and the dimensions to which it attains.

Q. Is not the bark of oak very useful?

A. Yes; before oak timber is in a state to be used, it is requisite that the bark should be stripped off, and the trees then suffered to stand uncut for three or four years, that they may become perfectly dry; and the bark thus obtained is very extensively used in the tanning of leather.

Q. Has not the poet Gray depicted the oak and beech, in his "Ode to the Spring?"

A. Yes; the lines are as follow—

"Where'er the oak's thick branches stretch
  A broader browner shade;
Where'er the rude and moss-grown beech
  O'er-canopies the glade,
Beside some water's rushy brink
With me the muse shall sit, and think
(At ease reclin'd in rustic state,)
How vain the ardour of the crowd,
How low, how little are the proud,
  How indigent the great!"

Q. Where is the bread-fruit tree cultivated?

A. In the Sandwich islands, where the fruit is eaten as bread. It is also a native of many islands in the East Indies, but it is not there much cultivated.

Q. Describe the tree and its fruit.

A. The bread-fruit tree is about the size of a middling oak, and the fruit is of the size and shape of a child's head, growing on boughs like apples, with a thick and hard rind. When ripe, the fruit is yellow and soft, with a sweet and pleasant taste. It is, however, gathered green, baked in an oven, and the outside black crust being scraped off, there remains a tender thin crust, but the inside is soft and as white as snow, having somewhat the consistence of new bread.

Q. Has not this tree another useful property?

A. Yes, it has; for the inner rind of the young bark is manufactured into a kind of cloth, and worn by the natives.

Q. Describe the cork tree.

A. The cork tree grows in Spain and Portugal, and is a species of the oak; the external part is of a fungus texture, which, when stripped off, is that elastic substance we call cork, so serviceable for stopping bottles, &c.

CHAPTER XXVIII.

CLASS XXII.—*Diœcia.* (Stamens and Pistils distinct, upon different plants.)

EIGHT ORDERS.

Q. Give me an example of some plant comprehended in this class.

A. As there are many varieties of the willow every where to be met with, all of which belong to this class, I will describe the one most remarkable for its singularity, which is the round leafed willow. Its leaves are smooth, entire, and egg-shaped; the upper surface is green and wrinkled; the under one bluish, and covered with net work of veins, which are at first red, but afterwards become green. It is but a low shrub, and produces both flowers and leaves from the same bud.

Q But are there not other plants belonging to this class equally well known to us?

A. Yes; the parasitical misletoe, the yew tree, and hemp, belong to the twenty-second class.

Q. Why do you call the misletoe *parasitical?*

A. All plants that grow upon others are termed parasitical, and the misletoe is one of them. Instead of rooting and growing in the earth, it fixes itself into the branches of a tree, where it spreads and forms a bush. It is commonly found on apple trees, and sometimes on the oak, producing a number of white berries, of a sweetish taste.

Q. Was not this plant regarded with superstitious reverence by the ancient Britons?

A. Yes; it was always held sacred by them; but now it only retains a place at Christmas, to ornament our houses, and enliven the cheerless season of winter.

Q. Does not the yew tree bring to our mind recollections of past times?

A. Certainly; before the invention of gunpowder the archers' bows were made of yew, and the English were ever famous for their superior skill in archery.

"When the rude natives of this polish'd land
Form'd the strong phalanx of their valiant band,
With dext'rous hand the bended bow they drew,
And shap'd their arrows from the dusky yew.
Long the brave warriors fought with Cæsar's host,
And stood the bulwark of their native coast."

CHAPTER XXIX.

CLASS XXIII.—*Polygamia.* (Stamens and Pistils variously situated.)

THREE ORDERS.

Q. Describe some plant of this class.

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[*] Dr. Darwin conjectures that this spontaneous motion may be as necessary to the Sensitive Plant, as perpetual respiration is to animal life.

[†] The following lines, from "Rowden's Poetical Introduction to Botany," are sweetly descriptive of the citron, lemon, and orange.

"In beauty blooming, and in artless grace,
The fragrant *Citra* rears her glitt'ring race;
The pale-eyed *Lima*, lofty and austere,
Checks her gay suitors with a tone severe:
With milder charms along the fertile glade
Glows bright *Aurantia* with a deeper shade;
Rears her tall head in vegetable pride,
And bends her loaded boughs on every side.
These juicy stores to foreign skies unfold,
In clusters thick, like pendant drops of gold."

A. To the negroes of the West Indies there is no production more serviceable than the plaintain tree; I therefore select it. Its stem grows to the height of about twenty feet, with several leaves on the summit, many of which are eight feet long, and two feet broad, but remarkably thin and tender. The fruit is of a pale yellow colour, and is produced in bunches so large as to weigh about forty pounds.

Q. In what way is this plant so serviceable?

A. The fruit is, to the negroes, what bread is to us, and is denominated by them the staff of life. It is usually gathered before it is ripe, and after the skin has been peeled off, is roasted for a little while in a clear fire; it is then scraped and eaten as bread, for which it is an excellent substitute.

CHAPTER XXX.

Class XXIV.—*Cryptogamia.* (Flowers invisible.)

FOUR ORDERS.

Q. We are now come to the last class, which I believe you said comprehended all plants in which the flowers are *inconspicuous,* such as mosses, ferns, fungusses, &c.

A. I did; and among the latter, mushrooms are of course included. The common mushroom is a fungus, consisting of a white stalk, and a convex cover of white or brownish colour, which has, beneath, an irregular arrangement of gills of a pink hue when young, but afterwards a dark liver colour. When it first appears above the ground, a mushroom is smooth, and nearly globular, and in this state it is called a *button.*

Q. Ought not great caution to be used in selecting them?

A. Certainly; for though several of them are *edible,* many are extremely poisonous; and instances of the fatal effects arising from an indiscriminate adoption of them are very numerous. An emetic is the best remedy that can be administered in cases of injury arising from poisonous fungusses.

Q Does not that useful plant, the reindeer moss, belong to this class?

A. Yes; all mosses come under the general term *Cryptogamia.* The reindeer moss is an invaluable plant to the poor Laplanders; inasmuch as it not only wholly sustains their favourite animals, to whom they owe their greatest comforts, but they boil it in their broth, and find it a cordial and restorative, and even use it as a soft and easy bed for their new-born infants.

> "Fleet as the wind the hardy reindeer bounds
> Across the dreary waste and frozen grounds;
> Crops with vermilion lips the icy flower,
> Or sips, from crystal cups, the fleecy shower."

APPENDIX.

Of the method of forming an Herbarium, or Hortus Siccus.

It has been observed by the best writers on botany, that every person who wishes to become a complete botanist, will find it necessary to preserve, and to form into a collection, the plants which he has examined. We therefore present to those who have made some progress in this interesting study, a few directions which we have extracted from a scientific treatise.

"The best method of preserving them is by drying them; specimens ought to be collected when dry, and carried home in a tin box. Plants may be dried by pressing, in a box of sand, or with a hot smoothing iron. Each of these has its advantages.

"1. If pressure be employed, a botanical press may be procured. The press is made of two smooth boards of hard wood, 18 inches long, 12 broad and 2 thick. Screws must be fixed to each corner, with nuts. If a press cannot be easily had, books may be employed.

"Next, some quires of unsized blossom blotting paper must be provided. The specimens, when taken out of the tin box, must be carefully spread on a piece of pasteboard, covered with a single sheet of the blossom paper quite dry; then place three or four sheets of the same paper above the plant, to imbibe the moisture as it is pressed out; it is then to be put into the press. As many plants as the press will hold may be piled up in this manner. At first, they ought to be pressed gently.

"After being pressed for twenty-four hours or so, the plants ought to be examined, that any leaves or petals which have been folded, may be spread out, and dry sheets of paper laid over them. They may now be replaced in the press, and a greater degree of pressure applied. The press ought to stand near a fire, or in the sunshine. After remaining two days in this situation, they should be again examined, and dry sheets of paper be laid over them. The pressure then ought to be considerably increased. After remaining three days longer in the press, the plants may be taken out, and such as are sufficiently dry may be put in a dry sheet of writing paper. Those plants which are succulent may require more pressure, and the blossom paper again renewed.

"Plants which dry very quickly, ought to be pressed with considerable force when first put into the press; and, if delicate, the blossom paper should be changed every day. When the stem is woody it may be thinned with a knife, and if the flower be thick or globular, as the thistle, one side of it may be cut away; as all that is necessary, in a specimen, is to preserve the character of the class, order, genus, and species.

"2. Plants may be dried in a box of sand in a more expeditious manner, and this method preserves the colour of some plants better. The specimens, after being pressed for ten or twelve hours, must be laid within a sheet of blossom paper. The box must contain an inch deep of fine dry sand, on which the sheet is to be placed, and then covered with sand an inch thick: another sheet may then be deposited in the same manner, and so on, till the box be full. The box must be placed near a fire for two or three days. Then the sand must be carefully removed, and the plants examined. If not sufficiently dry, they may again be replaced in the same manner for a day or two.

"3. In drying plants with a hot smoothing iron, they must be placed within several sheets of blotting paper, and ironed until they become sufficiently dry. This method answers best for drying succulent and mucilaginous plants.

"4. When properly dried, the specimens should be placed in sheets of writing paper, and may be slightly fastened by making the top and bottom of the stalk pass through a slip of the paper, cut neatly for the purpose. Then the name of the genus and species should be written down, the place where it was found, nature of the soil, and season of the year. These specimens may be collected into genera, orders, and classes, and titled or preserved in a portfolio or cabinet."

RECIPES.

TO MAKE A CHEAP AND WHOLESOME TABLE BEER.

Take 8 bottles of water, 1 quart of molasses, 1 pint of yeast, 1 table spoonful of ginger, 1½ table spoonsful of cremor tartar. These ingredients being well stirred and mixed in an open vessel, after standing 24 hours, the beer may be bottled and used immediately.

TO REMOVE THE TASTE OF TURNIPS FROM MILK OR BUTTER.

The taste of the turnip is easily taken off milk and butter, by dissolving a little nitre in spring water, which being kept in a bottle, and a small teacup full put into 8 gallons of milk when warm from the cow, entirely removes any taste or flavour of the turnip.

A CURE FOR THE CROUP.

Take an equal portion of pulverized alum and honey, (say a table spoonful of each,) mix well, and give a tea spoonful every two or three minutes till it operates as an emetic, which it will do in a few minutes.

CURE FOR ROT IN SHEEP.

To accomplish so desirable an event, salt is one of the most active remedies; but the quantity usually allowed by graziers, is insufficient to be effective: one ton of salt to every hundred sheep, is the proportion employed annually by Lord Somerville, and advantages would be derived by the combination of chemical and physical adjuvants with the salt—hence, mercury in minute proportions, mixed with preparations of iron, might avert the inevitable fate which awaits the animal, of the disease called the rot.—Two grains of phosphate of mercury, three tea-spoonsful of the rust or sub-carbonate of iron, and ten grains of Cayenne pepper, should be mixed with the salt, or given mechanically to each sheep daily. The combination may not, in the estimation of professional men, be very elegant or chymical, but it is recommended, thus combined, to save unnecessary trouble; and, as an occasional stimulating physic, the animal may be drenched with half an ounce of oil of turpentine in a quarter of a pint of milk.

An intelligent friend is of opinion, that a cure may be effected by turning the diseased sheep into salt marshes: and that the rot may be altogether prevented by letting the sheep have constant access to salt. [*English paper.*

PEACH AND APRICOT WINE.

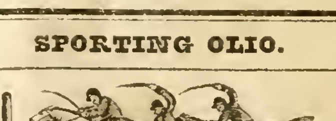
Take peaches, nectarines, &c., pare them, and take the stones out; then slice them thin, and pour over them from a gallon to two gallons of water, and a quart of white wine. Place the whole on a fire to simmer gently for a considerable time, till the sliced fruit becomes soft; pour off the liquid part into another vessel containing more peaches that have been sliced but not heated; let them stand for twelve hours, then pour out the liquid part, and press what remains through a fine hair bag. Let the whole be now put into a cask to ferment; add of loaf sugar a pound and a half to each gallon—boil well an ounce of beaten cloves in a quart of white wine, and add to it the above.

Apricot wine may be made by only bruising the fruit and pouring the hot liquor over it. This wine does not require so much sweetening. To give it a curious flavour, boil an ounce of mace, and half an ounce of nutmegs, in a quart of white wine; and when the wine is fermenting pour the liquid in hot. In about twenty days, or a month, these wines will be fit for bottling.

TO RESTORE FLAT WINES.

Flat wines may be restored by one pound of jar raisins, one pound of honey, and half a pint of spirit of wine, beaten up in a mortar with some of the wine, and then the contents put into the cask.

SPORTING OLIO.



Singular Racing—*Men against Horses.*

To the Editor of the American Farmer.

Sir,—I shall undertake to give you a paragraph for your Sporting Olio, and if it should contribute to

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Inconspic'uous, *a.* not to be seen.
Ed'ible, *a.* fit to be eaten.

the amusement of any of your numerous readers they are welcome to it, as I can assure you, it gave great gratification to the crowd present.

A considerable wager was laid on a span of horses owned by S. Harrington, Jr. of this place, and any number of men that could be produced, to run as follows: They were to start the horses attached to a two-horse wagon, and have four persons, in all, aboard: the ground to be run over began at Mr. Harrington's house, and terminated at Sweet & Brown's store, a distance of about four miles of uneven road. The horses were to allow the men fifty rods at the beginning of the race; and at the distance of fifty rods from the place of starting, the first man out of twenty-three in number was placed, and the rest at equal distances from each other to the end of the course, and, as one of the men had ran fifty rods to the next man, and touched him, the first man stopped and the next started, and so on to the end—the ground being accurately surveyed into equal parts.

On Saturday last, in the presence of a great concourse of people, at the sound of the bugle the race commenced; bets and opinions were various as the ground ascended or descended; but, at length, the men came out the conquerors by about 100 rods. The race was run in 12 minutes and 30 seconds. The sport was good, all were pleased, and no accident happened throughout the whole.

Stephenstown, Rensselaer Co. N. Y. June 10, 1325.

THE FARMER.

BALTIMORE, FRIDAY, JULY 15, 1825.

☞MR. PICKERING'S FOUR LETTERS, lately published in this paper, were all copied from that excellent journal, the New England Farmer, to which credit was, from inadvertence, not given, except in the first number, which was published whilst the Editor of this paper was at his post; and in the commencement of which it is stated that it will be followed by three other numbers.

The public will be much indebted to Col. Pickering for the discussion upon the important subject of improving our native breed of cattle—in the outset of which he observed, "at any rate improvements in both ways may go hand in hand, and be mutually beneficial to both sorts of improvers"—meaning those who improve by selecting the best natives, and those who improve by means of the most improved breeds of England.

☞THE MILITARY ACADEMY.—The further notice of this institution, prepared for this number of the Farmer, relates to the subjects and course of instruction, but it has been excluded by the several long articles entitled to preference.

In saying that the benefits of the West Point Academy had not been until lately equally distributed, we did not mean the slightest imputation against the late Secretary at War. The Academy received his most fostering care, and attained, under his administration, its present flourishing condition.

☞Pinnock's Catechism of Botany, which is finished in this number, has, we must confess, occupied more room than we had anticipated. It was inserted with a view of giving to farmers, and farmers' sons, a clue which will facilitate the further study of a science with which every lady and gentleman in town and country ought to be acquainted to a certain extent, whilst the catechism may, of itself, answer a useful purpose to those who have not opportunity to prosecute the study in all its details.

☞We shall fill the next number with original communications that have been withheld for some time, without the least want of respect for their merits, or of esteem for their authors.

LARGE FIG.—A fig was left at the office of the American Farmer on Monday, by A. H. Boyd, Esq., which measured horizontally 7½ inches, and in its largest circumference 8¾ inches. It grew in open ground, in the western precincts of Baltimore, without any protection but rough manure about the roots in winter.

IMPORTANT BIRTH.—Lady Lightfoot, (now owned by Charles Henry Hall, Esq., of New York,) has brought safely into the world a fine horse colt, got by Eclipse. The colt is of jet black colour without a speck of white, and our correspondent states, that from close observation he thinks the colour will not change. Having all the fine points of sire and dam, he is of course handsomer than either.

THE WHEAT CROPS—in Frederick county, Maryland, are represented by the Editor of the Examiner to be most abundant, and they have seldom been equalled. Owing to the difficulty of procuring hands, many farmers have not yet finished harvesting, and in consequence may lose a small portion of their grain.

Our farmers (says the Easton Gazette,) have pretty generally come in since their harvest was secured, and all accounts agree in the general defectiveness of the grain. The crop of straw, though indifferent from the rust in quality, is in bulk about an average; but the crop of grain will be short in quantity, and of inferior quality.

COMMERCIAL RECORD.

Extract from a letter from Liverpool, dated June 4.

"The sales of Cotton this week have been extremely limited, amounting only to 1920 bales of all sorts, and including of American, 840 bales Uplands, at 16½ to 19d; 424 Orleans, 17¼ to 21d; 110 Tennessees and Alabamas, at 17 5-8 to 18½d; and 37 Sea Islands. The contest is still continued between the sellers and purchasers, and it is a matter of astonishment to many that the holders remain so firm, and that the dealers who have been here and made offers for cotton at a reduced price, have not been accepted. The import into this port the first five months of this year, have been 283,096 bags, against 216,548 bags in the same period of last year, being an increase of 66,548 bags; and of Cotton from the United States the import is 166,620, being 16,426 more than in the same period last year.—Some of the brokers have hazarded opinions as to the import of the next seven months, and also as to the consumption, and have drawn the conclusion that the stock at the end of the year will be less than 50,000 bags. We think the consumption at present is unabated, but they are extremely dull in Manchester, and we have yet to see whether this dullness will not be felt on the general consumption. We have had several arrivals of Turpentine, and the only two parcels sold, were at a decline of 6d to 9d per cwt. on the preceding sale—one parcel of 1000 bbls. was withdrawn. Ashes are extremely flat, but U. States' not being so plentiful, prices are better supported. Tobacco remains steady, and in fair request at former prices. About 150 hhds. have been taken by the trade and for Ireland, and some little has been done on speculation—we quote Virginia leaf, in bond, 2¾ to 8; stemmed 2¾ to 7½; Kentucky leaf 2¾ to 3¾; stemmed 4 to 5½. In Rice, the sales amount to only 62 tierces Carolina, at 17s. 6d to 21s."

Amount of inspections in the state warehouses for the last week, viz:

Warehouse No. 2, ... 51 hhds.
3, ... 149—200 hhds.

CONTENTS OF THIS NUMBER.

Col. J. H. Powel in Reply to Col. Pickering on Native Cattle, No. 3—Lorain's Husbandry, on Barns, Cattle, Sheds, &c.—On the use of Flaxseed for Fattening Cattle—Query on Feeding with Linseed—Agriculture in England—Superior Merino Ram, of Mr. Wadsworth—Pinnock's Catechism of Botany, concluded—Recipes—Singular Racing—Editorial—Prospect of Crops—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9	9 50		
BACON, and Hams, . .	lb.	7	9	10	
COFFEE, W.I. Green, .	—	17½	18	20	25
do. Common,	—	16	16½	18	29
COTTON, Louisiana, &c.	—	24	29		
Georgia Upland, . . .	—	22	26		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	11	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	35	38		
FISH, Herrings, Sus.	bbl.	2 18		2 25	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 50	4 75		
Fine, ...	—	4 25			
Susquehanna, superfi.	—	4 38			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	44	46		
Wheat, White, ...	—	90	95		
do. Red, ...	—	84	86		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, Red . .	—	3 75		4	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		30	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	200			
HOGS' LARD, ...	lb.	8	9		dull
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, Havana, .	gal.	24	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7½	8
NAVAL STORES, Tar,	bbl.	1 62		1 87	
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2 50			
OIL, Whale, common, .	gal.	24	26		
Linseed, ...	—	80			
PORK, Baltimore Mess,	bbl	15	15 50		
do. Prime, . . .	—	11 50			
PLASTER, cargo price,	ton.	4 00	4 25		
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 25	3 75		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	26			
PEACH BRANDY, 4th pr	—		82	1	
APPLE BRANDY, 1st pr	—	40			
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	9 50	10		
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	75			
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	2 50		3 00	
Nutmegs, ...	—	2 00		2 25	
Pepper, ...	—	19		25	
SALT, St. Ubes, ...	bush	40			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	2 70	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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EDUCATION.

THE MILITARY ACADEMY

at West Point.

In our former notice of this institution, enough was said to impress our readers with a sense of its national importance. We propose now, having immediate reference to the regulations for its government, to speak more particularly of its organization—the course of instruction prescribed—and of the examinations conducted by the Academick Board in the presence of the Board of Visiters. That it should be necessary to speak at all of a great publick school, founded by publick law, and administered by the general government, as if it were just starting into existence, may appear superfluous to those who do not reflect that it has been developed and grown into its present repute and utility within a very few years.

According to the army regulations, the commandant of the U. States' corps of engineers (now Gen. Alex'r Macomb, of Plattsburg memory,) is the Inspector of the academy; and it is made his duty to inspect it thoroughly once a year: but a Superintendant is appointed by law from the corps of engineers, who has the immediate control, directs the studies, field exercises, and other academic duties—has command of all connected with it, and is held responsible for its management. That superintendant, at present, is Col. Thayer, a fellow graduate, we believe, with Mr. Webster. Col. Thayer has visited Europe since the war, for professional insight, and is so peculiarly and obviously adapted, in habits and acquirements, to the station, as to beget an apprehension in the minds of friendly visiters, that the prosperity of the institution may be too dependent on his personal and peculiar fitness to conduct it.

The academick staff, attached to the academy, consists of the following members, arranged according to their relative rank:

1. Superintendant.
2. The Regular Professors appointed by law, according to their pay proper; and when that is equal, according to the dates of their appointments, respectively.
3. The Military Instructors, having the rank of field officers.
4. The Acting Professors.
5. The Principal Teachers, appointed as by law.
6. The Military instructors, having the rank of captain in the army.
7. The Assistant Professors, appointed as by law.
8. The Assistant Teacher of French.
9. All other officers attached to the academy, take precedence according to the dates of their commissions in the army.

"It is made the duty of the Academic Board, to regulate the system of class books; to recommend for purchase all such books, maps, models, and apparatus, as may be required in the several departments of instruction; to superintend the initial, and all other examinations of the cadets; decide on their merits and standing; grant diplomas; and recommend for promotion. It shall also be the duty of the board, immediately after the June examination, annually, to report to the Secretary of War on the system of studies and instruction; proposing for his approbation such additional rules and regulations for perfecting the same, and such improvements in those already existing, as experience may have suggested."

The Secretary of War is required to appoint annually a Board of Visiters, to consist of not less than five gentlemen, whose duties may be understood from the following extract from the circular addressed by him to the gentlemen selected to compose it:

(circular.)

Sir, *Department of War, March 24, 1825.*

The regulations of this department for the government of the Military Academy at West Point, direct, that the students of that institution shall be examined in all the branches of science and instruction, through which they have passed, in the presence of a Board of Visiters, and such other literary gentlemen as shall be invited to attend. In conformity with which, I have the honour to invite you to attend the examination of the Cadets at West Point, which will commence on the first Monday in June next, as a member of the above board: and I shall be highly gratified to receive a report of your observations upon the actual state and progress of the institution, and such suggestions for its improvement, as you may deem necessary.

I have the honour to be, sir,
With much respect,
Your most obed't serv't,
JAMES BARBOUR.

J S. Skinner, Esq., *Baltimore.*

The previous education necessary to admission at the academy, is to be able to read and write well, and to work easily and accurately, the four ground rules of arithmetick—of reduction—of simple and compound proportion, and vulgar and decimal fractions.

"No candidate for admission shall be received into the academy, who is below 4 feet 9 inches in height, or who is deformed, or afflicted with any disease or infirmity which would render him unfit for military service; or who may bring with him at the time of presenting himself, any disorder of an infectious character."

The candidates are examined for admission in June, but cannot get their warrants until after their semi-annual examination in January; nor then, unless upon the certificate of the academick board that they have passed that examination in a satisfactory manner, and that their moral and military conduct have in like manner been correct. We shall close the present sketch, by exhibiting a part of the course of instruction—and at another time we shall make known the classification—the examination, and the formation of the rolls for designating the relative merit of the cadets in each class—the regulations in regard to promotion, furloughs, uniform, accounts, and discipline. A view of these regulations will enable those who seek to place their children in this institution, to form an idea of the effect which such a course of instruction is likely to have on the morals and character, and how far it is likely to qualify them to be useful to their country, and to acquire a name and a livelihood for themselves.

COURSE OF INSTRUCTION.

The following branches of knowledge, together with a course of practical military instruction, will be considered as comprising a complete course of education at the military academy, viz: the French Language, Drawing, Geography, History and Ethicks, Chymistry and Mineralogy, Mathematicks, Natural Philosophy, Engineering, and the science of War.

The course of French shall consist in pronouncing the language tolerably, and in translating French into English, and English into French, accurately.

The course of Drawing will embrace, 1st, the elements of the *human figure;* 2d, a series of elementary studies in *landscape,* with the pencil; the art of shading geometrical figures with Indian ink; the shading and finishing of *landscapes* in Indian ink; sketches from nature, and elements of *topography,* with the pen and pencil, and with Indian ink and colours.

The course of Geography shall comprehend a knowledge of the grand divisions of the earth, and of the relative situation, extent and boundaries, of the several countries in each of those grand divisions; a knowledge of their natural productions, commerce, and manufactures, governments, naval and military strength, and relative importance, together with the use of the maps.

The course of History shall comprise a general summary of universal history, with a view, more particularly, of the history and political relations of the United States.

The course of Ethicks will include moral philosophy, and the elements of national and political law.

The course of Chymistry and Mineralogy will embrace, 1st, *Chymical Philosophy,* including the theory and practice of analysis, and the examination of vegetable and animal productions. 2d—*Application of Chymistry to the Arts* of agriculture, distilling, tanning, dying, bleaching, gilding, pyrotechny, &c. &c 3d—*Mineralogy and Geology,* viz: classification and description of mineral substances; general structure and classification of rocks; analysis and uses of minerals; view of the different systems of geology and mineralogy, and an account of the minerals and geology of the United States.

The complete course of Mathematics will comprehend:

Algebra, viz. Fundamental operations, involutions and evolutions, reduction and conversion of fractional and surd quantities; reduction and solution of equations, (to include those of the third degree,) ratios and proportions, summation of infinite series and figurate numbers, nature and construction of logarithms.

Geometry, viz. Plane and solid geometry, and the formation and construction of determinate geometrical equations.

Trigonometry, viz. The solution of all the various cases in plane and spherical trigonometry; spherical projections, analytical investigation of trigonometrical formulæ and the construction of tables.

Surveying, viz. Mensuration of planes and solids, principles and practice of common land surveying, different methods of plotting and calculating such surveys, and the use of mathematical instruments. Also, trigonometrical surveying, and measurement of heights and distances, together with the use of the instruments usually employed therein.

Descriptive Geometry, viz. The graphic illustration and solution of problems in solid geometry generally, and the particular application of this method to spherics and conic sections.

Perspective, viz. The theory and use of linear perspective shades and shadows.

Analytical Geometry, viz. The construction and analysis of linear and superficial loci, particularly for equations of the first and second order.

Fluxions, viz. The direct and inverse methods of fluxions; their application to maxima and minima; the drawing of tangents, rectification of curves, radii of curvature; graduaters, cubatures, &c. &c.

The course of Natural Philosophy, will consist of mechanics, experimental philosophy, and astronomy.

The course in Mechanics will embrace:

Statics, viz. The equilibrium of forces at rest, centres of gravity, mechanical powers, strength and stress of materials, and theory of arches.

Dynamics, viz. The laws in general of uniform and variable motion, falling bodies, motion of projectiles in vacuo, vibration of the pendulum, central forces, and laws of the planetary motions; percussion and rotary motion.

Hydrostatics, viz. The pressure of fluids, specific gravity, theory of the stability of vessels.

Hydrodynamics, viz. Theory of effluent fluids; estimate of the force, motion, and resistance of fluids; calculation of the moving force of water in mills.

Pneumatics, viz. Compression, density, and elasticity of air; theory and practice of barometric measurement; acoustics; explanation of the wind; wind as a moving force; theory of pumps.

Application of Mechanics in various arts, and in the construction of machinery, consideration of first movers, combination and simplification of machinery, calculation of the maximum effects of machines; critical examination and analysis of various kinds of mills, engines, hydraulic works, &c.

The instruction in Experimental Philosophy will include an illustration of the various properties of heat, the principles of light and colours, refraction and reflection of light, theory and use of lenses, construction of optical instruments; likewise, the experimental investigation of the principles of magnetism, and of common and galvanic electricity.

The course of Astronomy will comprehend a description of the solar system, and of the celestial and terrestrial spheres; motion of the earth, and the various vicissitudes and appearances arising therefrom; solution of the problems on the globes; figure of the earth; equation of time; motion, phases, and irregularities of the moon; eclipses of the sun and moon; theory of tides; physical laws of the motion of the planets, primary and secondary, and of the comets, and the determination of their orbits; theory of the corrections arising from parallax refraction, aberration, precession, and nutation; application of spherical trigonometry to astronomy; use of instruments and tables; various methods of making, clearing, and calculating observations for the time, latitude, longitude, and true meridian; application of astronomy to navigation; and the construction of general charts.

The course of Engineering and the Science of War will comprehend:

Field Fortification, viz. The description and analysis of the various systems of fortified lines; construction of batteries and redoubts; calculation of the labour, time, and materials for the construction of different kinds of field works; military bridges: defence of posts; field defilement; practical operations on the ground.

Permanent Fortification, viz. The attack and defence of fortified places; analysis of the systems of Vauban, Cohorn, Cormontaigne, and of the later improvements; construction of mines and fougasses; and their use in the attack and defence of works; construction of works; art of defilement; armament of fortresses.

Science of Artillery, viz. The knowledge and use of the various kinds of ordnance and military projectiles; principles of gunnery. &c. &c.

Grand Tactics, viz. Organization of armies; marches; orders of battle; battles; general maxims deduced from the most important operations on record; castrametation.

Civil and Military Architecture, viz. Elementary parts of buildings, and their combination; orders of architecture, construction of buildings and arches, canals, bridges, and other public works; machines used in constructions; also, the execution of a series of drawings, consisting of plans, elevations and sections, to illustrate the principal parts of the course.

In our next number we shall give some specimens of the actual examinations before the Board of Visiters, with illustrations connected with the course on *civil engineering*.

The following is a correct list of the Graduates at the last examination, with their rank, all of whose commissions bear date July 1, 1825:

No.	*Names—and from what State.*	*In what corps commissioned.*
1	Alex'r D. Bache, Pennsylvania	2d Lt. Engineers
2	Peter M'Martin, New York .	do do
3	Alex'r H. Bowman, Penn. . .	do do
4	Thompson S. Brown, N. York	do do
5	Daniel J. Donelson, Tennessee	2d Lt. Artillery
6	Stephen V. R. Ryan, N. York	do do
7	Raphael C. Smiad, do. . .	do do
8	Benjamin Huger, S. Carolina	do do
9	Francis Taylor, Virginia . .	do do
10	Abbott H. Brisbane, S. Caro.	do do
11	Wm. F. Hopkins, Connecticut	2d Lt. Artillery
12	Wm. A. Thornton, N. York .	do do
13	Jos. W. Harris, N. Hampshire	do do
14	M. R. F. Harrison, Georgia .	do do
15	Robert Anderson, Kentucky .	do do
16	Alex'r D. Mackay, N. York .	do do
17	James R. Irwin, Pennsylvania	do do
18	Horace Smith, N. York . . .	do do
19	Chas. F. Smith, Pennsylvania	do do
20	Washington Seawell, Virginia	2d Lt. Infantry
21	Lawrence F. Carter, do.	do do
22	Fred'k Norcum, N. Carolina .	do do
23	Nathaniel H. Street, do. . .	do do
24	Joseph S. Worth, N. York . .	do do
25	Nathaniel S. Harris, N. Jersey	do do
26	Osborn Cross, Maryland . . .	do do
27	Joseph Bonnell, Pennsylvania	do do
28	W. R. Montgomery, N. Jersey	do do
29	James S. Thompson, Maryland	do do
30	James J. Anderson, Kentucky	do do
31	James D. Burnham, N. York	2d Lt. Marines
32	Gustavus Dorr, Massachusetts	2d Lt. Infantry
33	Frederick Thomas, Vermont	2d Lt. Marines
34	George W. Garcy, Maryland	2d Lt. Infantry
35	James Engle, N. Jersey . . .	do do
35	Joseph Clay, Georgia	do do
37	Sam'l R. Allston, Massach'tts	2d Lt. Marines

AGRICULTURE.

SHEEP.

[Interesting observations on a certain fatal disease prevailing in a flock of sheep in Warren county, in Pennsylvania, with remarks on the management of sheep in general. Of the growing importance of sheep husbandry, we cannot give better proof. nor better assurance, that it will be well elucidated, in all its bearings, than by offering the observations of correspondents such as Mr. Irvine and Mr. Reed—which follow:]

Dear Sir, *Warren county, July* 3, 1825.

Having observed a new disorder among our merino sheep, and being under the impression that a slight notice would not be useless, I will mention it as briefly as possible; leaving it for you to say whether it possesses sufficient interest for publication.—Noticing some of our sheep rubbing themselves against the fences, induced me to examine them more particularly; and in passing through the field for this purpose, I found one of the ewes lying on the ground, apparently unable to rise, although appearing otherwise well. Observing a small portion of the wool on the tail off, induced me to examine more closely; when I found that the whole of the fleece on the rump could be raised, and that the flesh was completely gangrened, and swarming with maggots. This sheep died before morning. I had this flock brought up, and set my hands to examining them. We found, out of two hundred and ten ewes, fifty affected in the same manner, although not so badly. I had the wool cut off around those parts, and applied spirits of turpentine, which had the desired effect of driving off these intruders.—There is nothing which acts quicker than the turpentine, and it is a good general remedy for sheep. I next had the other flocks examined; but could not discover among the wethers and rams, any of them in the same condition. These last were kept in the same manner, and were equally exposed to the weather. It was a new thing among our sheep, and puzzled our shepherd to account for it. These ewes had not been cleaned as well as they might have been; and probably the wet (it having rained for a week before,) acting upon the filth generally found sticking about the rump, and the hot sun cooperating, produced the maggots; or, what is more probable, the membranes (after lambing,) remaining for some time, and acted upon by the same cause, produced them.*

What renders this latter opinion more plausible, is the circumstance of the ewes in another flock, which had lambed early in the season, were not affected, although kept precisely in the same manner. In future, I will have the wool on the tail and between the thighs cut off as closely as possible, before they are turned out to pasture. It is at this time that the change of food produces a purging, and if the wool is not sheared close about those parts, it collects in large quantities, and is very troublesome to remove; and if left till shearing time, interferes very much with that operation. There is a positive gain in pursuing this plan; for the wool is of little value; and is ultimately lost. I do not know whether this plan has ever been put in practice. Sheep are very delicate animals, and require much attention and frequent examinations. Generally too much grain is given them during the winter. It predisposes to inflammatory attacks, and has an effect on the fine wool. I am satisfied, from ocular demonstration at our shearing, that the thinnest sheep produce the finest wool.

Our wool is of superior quality—among the finest of the American merino; and I am confident, that with care in selecting breeders, we shall in a few years equal any of the imported. We sheared four pounds from a full blood wether, after being well washed in the clear and swift current of the Alleghany. From a ram five pounds, and an average of two from the ewes. Two and a half is the general average, but these sheep were remarkably well washed. I coincide with Mr. Pickering in the opinion that we have stock of our own, which, with proper attention, could be made equal to any of the imported; and would include those merinos already in the country. Respectfully, yours,

WM. ARMSTRONG IRVINE.

MERINO SHEEP.

Washington, July 12, 1825.

John S. Skinner, Esq.

In compliance with your request for information on the subject of sheep and wool, I send you a sketch of such as was within my power to collect. The result of the most diligent inquiry, warrants us in estimating the sheep in this county at somewhat over one hundred thousand. The wool shorn this season, will exceed four hundred thousand pounds. Between one-third and one-fourth of this, is Merino of different grades, from full, down to quarter bred. About three-fourths of the whole quantity is believed to be manufactured in a domestic way, into narrow cloths, blankets, linseys, flannels and stockings.

A considerable quantity of the linsey is sent down the Ohio, and to the different iron works in this vicinity. Upwards of one hundred thousand pounds are sold in an unmanufactured state. Messrs. B. Wells & Co., of Steubenville, Ohio, purchase most of the fine wool—probably about one-third of the whole quantity sold. The small manufacturing establishments consume about another third, and the remaining third we send eastward.

The Harmony Society is erecting a large woollen manufactory, on the west bank of the Ohio, about 18 miles below Pittsburg, which will create an additional demand.

We are now beginning to reap some of the advantages from the tariff which the friends of that measure anticipated. Cash is readily procured for wool, at a fair price; and instead of advancing, the owners of the Steubenville establishment have reduced the prices of their goods.

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* These ewes lambed as late as the middle of May, and were lambing at the time the maggots made their appearance.

These gentlemen deserve the grateful thanks of every friend of domestic improvement, for their perseverance in meeting and overcoming the very numerous obstacles they had to encounter. Had it not been for their patriotic exertions, we should have now but very few fine sheep in this section of country. They have demonstrated the fact, that such establishments, when conducted with skill and prudence, must succeed in our country, and amply compensate those who employ their capital in this way.

It is the opinion of those who have had the best opportunity of obtaining information, that wool has brought more money into our county this year, than wheat. My flocks afforded me more profit after deducting all expenses, than the farms they occupy would have brought me in rents, for three years. The average price of my unwashed wool was 48½ cents per pound. Taking the present prices of wool and grain as our data, the expense of production is about as one to four.

At first view, the estimated quantity manufactured in a domestic way may appear large, but when it is known that nine-tenths of our population are clothed entirely in their own manufactures, and that it does not much exceed six pounds of unwashed wool, or four pounds when washed, for each inhabitant, the estimate must be considered under, rather than above the mark. In order to come to a more correct conclusion on this point, I enquired of a number of farmers, indiscriminately, as I met them, and found that the quantity averaged nearly eight pounds.

Some trials have been made with us, as to the merinos retaining their fleeces for more than one year, with the same success that attended Mr. Wadsworth's experiment. Should it be found, on full trial, that letting them remain unshorn for two years will not prove injurious to their health, we will then have materials for making the finest kind of worsted goods.

We hear much from various writers, of their bad forms, inaptitude to fatten, &c. &c. We can demonstrate, by an exhibition of our own flocks that this is a mistaken notion, at least, with regard to those amongst us. We do not pretend to say that they will produce as heavy carcasses as the Dishley, nor so heavy fleeces as some of the coarse woolled breeds. But, let us fairly estimate the value of the fleece and carcass, and the quantity of food consumed, and we can no longer hesitate in giving them a decided preference.

I would here observe, that all who have persevered in keeping the merino sheep, and bestowed proper attention to their flocks, have been amply compensated, and in some instances, a handsome independence has been secured. This is gradually securing them that place, in the estimation of our most judicious farmers, which they so richly merit. This preference arises not from extravagant calculations on paper, nor does it proceed from a mad speculation mania. It is bottomed on *facts* elicited by long and well tested experience.

I am, very sincerely, yours,

ALEXANDER REED.

COTTON.

Eastern Shore, Virginia, July 6, 1825.

The cultivation of cotton having engaged the attention of a large portion of this state, every thing which appears in your paper connected with the subject must be highly interesting to your subscribers in this section of the Union. It is only within a few years past that it has been cultivated in Virginia as a crop, and this year the product will probably double that of any preceding. The two counties on this shore which have never yet sent a pound to market, have now upwards of 3000 acres employed in this way; and I am informed that it is the same case with several counties on the Western Shore.

This being then our first attempt, we are unacquainted with the proper method of *packing;* and any information which you can give on this subject would be very acceptable. The communication in the last number, from "a Washita farmer," I read with pleasure; but it would have been more satisfactory had he given such a sketch of the framing and machinery, with the dimensions of the timber, &c. that a common carpenter could erect one, supposing the screws to be provided.

Allow me to inquire also, what kind of wood is considered best for the screw? Has persimmon ever been tried? What are the proper dimensions for it? Are they to be purchased in Baltimore, and at what price? FRANCIS H. SMITH.

[We will feel much obliged to any gentleman in the south who can answer these enquiries.]

PROCEEDINGS OF AGRICULTURAL SOCIETIES.

Philadelphia Society for Promoting Agriculture.

Stated Meeting, April 19, 1825.—Dr. Mease, vice-president, in the chair. The following papers were read:

1. A letter from Major S. H. Long, giving a description of the Rocky Mountain goat, a notice of their geographical range, and principal place of resort. The information detailed was given by Mr. Donald M'Kenzie, of the British Hudson Bay Company, with whom Major Long met on his late journey to St. Peter's river, at the mouth of the Assiniboin river, and afterwards confirmed by Mr. Henry of the same company, at Fort William, on lake Superior. Both those gentlemen spoke from personal observation. The fleeces of these native animals, one of which is in Peale's Museum, exceed in downy softness that of the Thibet goat, and their introduction into the United States would add greatly to the national wealth. France has already been repaid by working up the fleeces of the Thibet animal imported a few years since, for the expense attending that memorable expedition.

2. A letter to the chairman from H. Barnard, of Hudson, New York, inclosing an account, by the builder, of the mode to be pursued in constructing an arched bridge of boards, a model of which is in possession of the society. These bridges are very neat, and from the ingenious mode adopted in forming the arch with the boards, are also very strong. The inventor was the late R. Robotham, of Hudson. The model of the bridge is at the service of the public. It is a proof of the excellence of the principles adopted in their construction, that they were erected in a country abounding with stone. In the alluvial districts of the United States, where stones are scarce, timber abounds, and the bridges are notoriously unsafe, the wooden structures of Mr. R. would be extremely useful. Even in Pennsylvania, so famous for bridges of all sizes, they might be found economical substitutes for more costly stone erections

3. R. Haines read a letter from James Hayward, of Berkshire, England, on the merits of three Suffolk pigs sent to him. They are of the same breed as the one of which there is a cut in the Agricultural Almanack for the year 1820. Some directions were given respecting the breed of swine.

Thomas Wistar, Jr., of Montgomery county, Pa., exhibited several larvæ of the *œstrus bovis*, or gadfly, recently taken from the back of one of his cows. These insects in the larva state are familiar to farmers by the name of warbles, and are known to be highly irritating to the animal they infest. In one case they actually caused the death of a young bull, (which was intended to be reared,) by the innumerable small abscesses which they gave rise to along the whole course of the spine. Some particulars respecting the various species of œstri that infest the internal organs and skins of domestic animals, were given in a report of a former meeting of this society. [American Farmer, No. 29, vol. 6.]

Edmund Rouvert. of New Jersey, sent a sod of a common and pretty plant, called ground laurel, to the eating of which he ascribed the death of a cow and sheep belonging to him. It is the *Epigœa repens* of the botanists. It does not belong to the laurel family, but its injurious effects upon cattle cannot be doubted, when freely eaten by them.

The attentive friend of the Society, in Scotland. sent three numbers in continuation of the Farmers' Magazine of Edinburgh. Two of them contain valuable papers on making butter, an abstract of which will appear in the next Agricultural Almanack, published under the patronage o fthe Society. The market of Philadelphia, although famous for good butter, yet often exhibits specimens of very moderate quality: this fact proves that many whose interest it is to bring to market an article in an acceptable form, which has become an indispensable one for the tables of every class of society, have yet to acquire the knowledge of the art. The paper alluded to, refers particularly to the making and curing butter for long keeping. Farmers will see. that like brewing, baking, and soap-making, the management of milk intended either for butter or cheese, may be improved by a knowledge of chymistry; and that success, or the want of it, in these operations, is explicable upon chymical principles.

W. M. Walmsley, treasurer of the society, announced his having received two half barrels of wheat (the growth of the vicinity of Malaga,) from Mr. Barroll, the United States' consul at that port. It will be sown next autumn, and the result made known.

ON SMUT IN WHEAT.

Mr. Skinner,

I have been making some observations on smutty wheat, which, if you should esteem worthy an insertion in your valuable paper, you may do so.

In the year 1821, I procured a handful of smutty wheat heads, cut about the first joint, about a week before harvest, and attached them to a bush in my garden. I viewed them very frequently, and in about three weeks after harvest I discovered the smut-bug or fly eating its way out through the chaff and bran. I then selected 10 or 15 heads, and placed them in a glass jar, and confined them closely by means of a piece of brown paper which I perforated with small pin holes for the purpose of admitting air. I also placed 30 grains of the smutted wheat in another jar, securing them in a similar manner, and placed them both in such a situation that the sun was admitted, and the rain excluded. I soon perceived the insects making their appearance in both jars, and still keeping them in that situation until the severe frosts commenced. I observed the fly was alive, and made its habitation of the grain they were feeding on, where they would remain during cold weather, until giving the jar a violent shake, they would venture forth. About the last of November, fearing my glasses would be blown down, I took them into a room in which there was continually a fire, after which I paid no attention to them until Christmas, when I discovered the bugs were still alive, though not so numerous as usual. I examined them again in the month of March, when I could find none of them. I placed them again in the sun, until the fall of the year, when not one bug made its appearance, although more than one-half of the smutty wheat was still whole. Of the grains, I suppose, one-half remained, and those in the head in the same proportion. I then rubbed out the good and three smutty grains, and having washed them, I sowed them together. They grew, have ripened well, and not one smutty grain is to be found. I have shelled all out, and examined them so minutely as to be convinced there is none. The produce is about the amount of a small sheaf. I attended to it from its blossoming until ripe, and never observed any insect about it.

A. SEYMOUR.

Hardy County, Va..July 30, 1823.

HORTICULTURE.

PRACTICAL HINTS ON THE CULTURE OF THE VINE.

State of Indiana, June 27, 1825.

In answer to some of the queries contained in a communication signed J. in your *Farmer* of the 3d inst., on the subject of the vine, I would observe, that the only mode of rearing vineyards known to me in Europe, is from slips or cuttings. In that part of Europe where I came from, when a proprietor intends planting a new vineyard, or to renew an old one, he selects his slips or cuttings from vines which he deems the best, or at least the most suitable to the piece of ground he intends planting. If he has not within himself what he deems the most suitable kinds, he procures them from his neighbours, or sometimes from a distant vineyard. Interest generally regulates the views of the proprietor in the selection of plants from among the different species; some preferring those kinds affording a superior quality of wine, to those producing it in greater abundance; whilst others may have good reasons to prefer those yielding the greatest quantity. But I have never known a new vineyard planted, or an old one renewed, with seeds or seedling plants. Vines raised from the seeds in Europe are generally many years before they bear fruit—some having been known to live ten, twelve and even thirty years before they commenced bearing, and only a small proportion of the plants raised from the seeds turns out to be varieties worth cultivating. Hence the impropriety of raising vineyards in that way. But although I would discourage any one from planting a vineyard with seeds, or seedling plants, yet I believe the raising of vines, from the seeds of the different species of our own native grapes, to be of the greatest importance. I have little or no doubt, but that by a persevering attention to that business, varieties might be obtained, which, if they did not equal the best European grapes as to the quality of the fruit for table use, they might as to quality for making wine, and undoubtedly surpass them as to hardiness in supporting the inclemency of our seasons.

Our country is so different in almost every thing from the old continent, that many of the plants, and many of the rules laid down and established there in some of the branches of agriculture and horticulture, will no more suit our climate and our native plants, than the doctrines of the holy alliance suit the liberal ideas of our citizens. Many attempts have been made at different times and in different parts of this Union, to establish vineyards on the plans and with the vines of those of France and Germany; but successes until now have been very partial, because neither the vines nor the plan of cultivation suited our climate. The success obtained at Vevay, in this state, in the culture of the vine, is owing to the kind cultivated, which is now well ascertained to be a native of Virginia, and was not originally imported from the *Cape of Good Hope,* as generally believed. Then, since a tolerable good wine grape has been found in Virginia, in a state of nature, it is reasonable to infer, that, if not by chance, at least with the aid of art, still better varieties may be produced. A gentleman of Tennessee, Mr. J. Field, by planting the seeds of native grapes, has obtained varieties different from and much superior to the parent stock; and a circumstance worthy of notice is, that his seedlings bore fruit the second or third year after planting. It has likewise been remarked in several places, where old fields had been abandoned and a new growth had taken possession of the soil, that new varieties of grape vines had sprung up, entirely different from any that had ever before been seen in those parts, some of which bore fruit of a much superior quality. Facts, such as these, prove beyond any reasonable doubt, that at least some of our indigenous vines are susceptible of amelioration, which induces a belief, that sooner or later, varieties of our native vines will be reared from the seed which will be found yielding abundance of good fruit, and be hardy enough to stand the frost of our hardest winters. This subject is worthy of the attention of intelligent gentlemen farmers, and I take the liberty to recommend to those whose circumstances will admit of their devoting a portion of their time for the benefit of society, to try experiments with the seeds of the native grapes, as well as with those of foreign grapes, and whenever good varieties shall be obtained, then propagate them by cuttings. As to the influence which vines of different kinds may have upon each other, when near together, I beg leave to doubt their having such, as to change the colour or quality of the immediate fruit of either. I have seen vines of different kinds in open vineyards, some red or purple and some white, planted at no more than two and a half feet distance from each other, and I have seen them in *espelliers,* or *treilles,* against the walls of houses, the branches of the red intermixing with those of the white, so that the fruit of each would come in contact, and sometimes a bunch of each joined together so closely as to appear as one bunch, which, when ripe, part would be red and part white; yet these vines had grown old without the least apparent influence from one to the other, as to the nature of their fruit or leaves; every year their fruit was the same, as well as the fruit of the vines raised from slips or cuttings taken from them. But I believe that vines raised from the seed of grapes of two different kinds, growing so close together, will in some measure partake of the nature of both, provided they both blossom at the same time. Wm. Speechly, an English gardener, who has written on the management of vines in hot houses, recommends the marrying of bunches of different kinds, to obtain improved varieties from their seeds.

Very respectfully,
Your obed't humble serv't, J. F. D.

J. S. Skinner, Esq.

ON THE CULTURE AND DISEASES OF THE PEACH TREE.

Dear Sir,

In the cultivation of the peach tree I have had no better luck than my neighbours. Three or four years after bearing, the leaves turn yellow, and the following year the tree dies. There is neither remedy nor palliation. This disease is well known as the yellows, and has been ascribed to different causes. The first is the worm. But the worm is easily destroyed, nor is it difficult to prevent their attacks; and among many hundreds that have perished in my garden, I have not found one in four which the worm had touched.

It has also been ascribed, and with greater plausibility, to a disorder in the farina, which carries the disease to the neighbouring plants. That it might injure the germ in the flower thus impregnated, and render it susceptible of continuing the disorder, if planted, is not at all improbable; for diseases in trees are generally hereditary, but I see no reason to suppose that the tree would be affected. A nurseryman showed me, in proof of his opinion, a number of peach trees together which were all disordered; but, on enquiry, I found them of the same variety. So in my own garden I found, that peach trees of the same kind and age generally went the same year while other kinds remained vigorous among them. Trees also planted at a great distance from others, I found, had the same short lived existence.

A gentleman of Georgia assured me that he had several times imported the peach from the middle states, but, that he had lost them soon by the yellows, while the common peach of the country remained unhurt.

Mr. Knight, of London, celebrated for his horticultural discoveries, considers, that a graft lives only the natural time of the parent stock, and, of course, that the variety cannot be continued longer by grafts. This theory is now generally received, and probably applies to most of our peaches. But, it is not less true, that the natural trees in this part of the country are generally diseased as well as the others.

Neither of the above theories will, therefore, serve for every case; but, the effect of grafting will, I think, include the whole, and, as the remedy would be the same, it is deserving of attention, at least, to enforce the necessity of an entire change of system.

The effect of grafting, like the new method of girdling, is to prevent the descent of the sap, continuing it in the branches, thereby forcing the fruit and surcharging the vessels of the graft. As this is an unnatural state of the tree, it must exist with a greater liability to disorder than the original, and a succession of grafts from grafts will ultimately produce a short lived sickly tree, of which the fruit partakes the disorders. Those who have observed grafted trees with attention, find that they require more attention than natural ones; that pruning is more necessary; and, it is probable, that from this circumstance it is owing that espaliers are more productive, and produce finer fruit, from the facility of raising continually new wood and fruit branches.

From the above observations it is to be inferred, that whether for fruit or stocks we should procure peach stones from those countries where the natural fruit is chiefly cultivated; that we should abandon all the varieties with us which are subject to the yellows; and that particular care should be given to propagate new varieties, as practised in Europe, but not with grafted trees. G. G.

RURAL ECONOMY.

FRENCH MODE OF SHOEING HORSES.

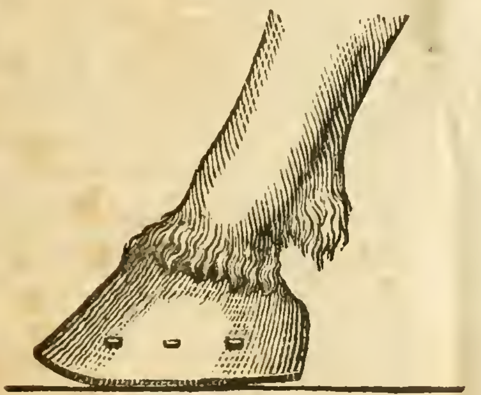
Each nation of Europe has its own peculiar mode of shoeing horses. In America, we follow the English method, which is very different from the French. The national antipathies of the French and English prevent, in a certain degree, the adoption of each other's improvements. An English physician will pertinaciously adhere to the use of emetics because the French prefer cathartics: on one side of the channel the horses have long tails, while on the other they are docked close to the rump: and an Englishman would no sooner part with his prejudices in favour of his own mode of shoeing horses, to adopt the French practice, than he would part with his light pumps and his cough, to thrust his feet into the wooden sabots of a Norman peasant. If we in America have national prejudices, (and who are without them?) I trust they are neither so unreasonable nor so violent as to make us quite blind to the merit of other nations' improvements.

A French shoe is shaped nearly as the hoof of the horse is naturally worn when left unshod, *as in the annexed cut.* An English shoe is flat, straight, and runs to a point at the toe. It would seem that a little reflection on the form of the foot, and the powers and actions of the horse, would indicate the proper mode of shoeing. When a moving horse rises upon his toe to deliver the weight of his body and transfer the exertions of his muscular force to another foot. reason suggests to us that he would tread more firmly and steadily upon a broad surface supporting as well the sides as the extremity of his foot, than upon a narrow, trembling point; that he would not be so liable to sprains and injuries in his limbs; that he would move with a clear unfaultering step, and travel in ease and safety. But the question has been solved by a protracted, and to the animal, a suffering experience, which a rational theory should have long since settled. An English gentleman who had travelled extensively on the continent, and made horses a subject of particular observation, said, that he had seen more lamed horses between Harwich and London, than he had met with in a tour over all France, and this he rightly attributed to the different modes in which they were shod,

I had no difficulty, after turning the subject over in my mind, in believing that the French mode at least deserved trial. The immediate advantage which I proposed to myself was to cure the stumbling of a horse which I then occasionally rode. I was satisfied with the experiment, and found, on trial, other advantages which I had not anticipated, and have now no expectation that I shall, when it can be done, have my horses shod in any other than the French mode. But, the smith raised some objections to the plan. It was, he said, about five minutes' more work to fit a set of shoes; that new shoes would be more seldom called for, these not being liable to be worn through at the toes; that the nails would not be drawn by straining on a hard road, nor loosened by striking the toes against stones and runners, and that, on the whole, he deemed the innovation not for the good of the trade.

In the hope that this item of French knowledge may be acceptable and perhaps useful to a portion of the American public, I offer it to Mr. Skinner for his invaluable journal. CALVIN JONES.

Wake Forest, May 21, 1825.



COWS.

Keep no more cows than you can keep well—one cow well fed will produce as much milk as two indifferently treated, and more butter; and if the cow be wintered badly, she will rarely recover, during the succeeding summer, so as to become profitable to the feeder. Cows should, by all means, be housed in extreme weather, and particularly those which give milk, or a failure in the quantity of milk will be experienced. Wherefore, instead of keeping twenty cows poorly fed, and but half of them stabled, sell ten, and give the remaining ten feed to the amount equal to what the twenty originally had; procure constant stabling for them, and you will find that you will receive quite as much milk and butter in return, as was derived from the former mode of treating 20. Sweet potatoes, carrots, pumpkins, and ground oats, are unquestionably among the best articles of food for milch cattle; they occasion the milk and butter to assume a fine flavour and colour, as well as increase of quantity.

[*Trenton Emporium.*

MILL STONES.

Mr. Skinner,

A subscriber to your useful paper wishes to be informed by some of your numerous readers and correspondents, what kind of mill stones are found, upon experience, to be the best and cheapest for grinding Indian corn; and where those which may be recommended, are to be had, and the prices of 4 and 4½ feet. And also, if any gentleman, having a knowledge of a quarry somewhere upon the Susquehanna, known by the name of the Round Top mountain, and another in Bucks county, Pennsylvania, upon Wissahicken creek, would also confer a favour by communicating such particular information of the proprietors' names and places, qualities and prices, as may be deemed useful—and in return for such favours, in a few months, I shall endeavour to requite their attention and civility with an account of an experiment which promises to be useful to the agricultural community.

JOHN B. BAYLESS.

N. B. To prevent imposition, it is desirable that any information upon the above subject, should be communicated under the authority of the name of the gentleman making it—and it would to me be the more useful and acceptable for being as early and prompt as possible.

MISCELLANEOUS.

SWIMMING.

[The art of swimming is so often the means of saving life, and the ignorance of it so frequently the cause of losing life prematurely, that all parents ought to consider it their bounden duty to see that their children learn to swim. It is as necessary a part of education as to teach them to avoid natural poisons. Besides being frequently essential to the preservation of existence, amidst the ordinary incidents of life, the pleasure to be derived from the exercise leads to health and cleanliness—hence we have selected for our young readers the following directions for learning to swim, given by Doctor Franklin.]

TO OLIVER NEALE, ON THE ART OF SWIMMING.

Dear Sir,

I cannot be of opinion with you that it is too late in life for you to learn to swim. The river near the bottom of your garden affords a most convenient place for the purpose. And as your new employment requires your being often on the water, of which you have such a dread, I think you would do well to make the trial; nothing being so likely to remove those apprehensions as the consciousness of an ability to swim to the shore, in case of an accident, or of supporting yourself in the water till a boat could come to take you up.

Choosing a place where the water deepens gradually, walk coolly into it till it is up to your breast, then turn round, your face to the shore, and throw an egg into the water between you and the shore. It will sink to the bottom, and be easily seen there, as your water is clear. It must lie in water so deep as that you cannot reach it to take it up but by diving for it. To encourage yourself in order to do this, reflect that your progress will be from deeper to shallower water, and that at any time you may, by bringing your legs under you and standing on the bottom, raise your head far above the water. Then plunge under it with your eyes open, throwing yourself towards the egg, and endeavouring by the action of your hands and feet against the water to get forward till within reach of it. In this attempt you will find, that the water buoys you up against your inclination; that it is not so easy a thing to sink as you imagined; that you cannot but by active force get down to the egg. Thus you feel the power of the water to support you, and learn to confide in that power; while your endeavours to overcome it, and to reach the egg, teach you the manner of acting on the water with your feet and hands, which action is afterwards used in swimming to support your head higher above water, or to go forward through it.

I would the more earnestly press you to the trial of this method. because, though I think I satisfied you that your body is lighter than water, and that you might float in it a long time with your mouth free for breathing, if you would put yourself in a proper posture, and would be still and forbear struggling; yet, till you have obtained this experimental confidence in the water, I cannot depend on your having the necessary presence of mind to recollect that posture and the directions I gave you relating to it. The surprise may put all out of your mind. For though we value ourselves on being reasonable knowing creatures, reason and knowledge seem on such occasions to be of little use to us; and the brutes to whom we allow scarce a glimmering of either, appear to have the advantage of us.

I will, however, take this opportunity of repeating those particulars to you, which I mentioned in our last conversation, as, by perusing them at your leisure, you may possibly imprint them so in your memory as on occasion to be of some use to you.

1. That though the legs, arms, and head, of a human body, being solid parts, are specifically something heavier than fresh water, yet the trunk, particularly the upper part, from its hollowness, is so much lighter than water, as that the whole of the body taken together is too light to sink wholly under water, but some part will remain above, until the lungs become filled with water, which happens from drawing water into them instead of air, when a person in the fright attempts breathing while the mouth and nostrils are under water.

2. That the legs and arms are specifically lighter than salt water, and will be supported by it, so that a human body would not sink in salt water, though the lungs were filled as above, but from the greater specific gravity of the head.

3. That, therefore, a person throwing himself on his back in salt water, and extending his arms, may easily lie so as to keep his mouth and nostrils free for breathing; and by a small motion of his hands may prevent turning, if he should perceive any tendency to it.

4. That, in fresh water, if a man throws himself on his back, near the surface, he cannot long continue in that situation but by proper action of his hands on the water. If he uses no such action, the legs and lower part of the body will gradually sink till he comes into an upright position, in which he will continue suspended, the hollow of the breast keeping the head uppermost.

5. But if, in this erect position, the head is kept upright above the shoulders, as when we stand on the ground, the immersion will, by the weight of that part of the head that is out of water, reach above the mouth and nostrils, perhaps a little above the eyes, so that a man cannot long remain suspended in water with his head in that position.

6 The body continuing suspended as before, and upright, if the head be leaned quite back, so that the face looks upwards, all the back part of the head being then under water, and its weight consequently in a great measure supported by it, the face will remain above water quite free for breathing, will rise an inch higher every inspiration, and sink as much every expiration, but never so low as that the water may come over the mouth.

7. If, therefore, a person unacquainted with swimming, and falling accidentally into the water, could have presence of mind sufficient to avoid struggling and plunging, and to let the body take this natural position, he might continue long safe from drowning

till perhaps help would come. For, as to the clothes, their additional weight while immersed is very inconsiderable, the water supporting it, though, when he comes out of the water, he would find them very heavy indeed.

But, as I said before, I would not advise you or any one to depend on having this presence of mind on such an occasion, but learn fairly to swim; as I wish all men were taught to do in their youth; they would, on many occurrences, be the safer for having that skill, and on many more the happier, as freer from painful apprehensions of danger, to say nothing of the enjoyment in so delightful and wholesome an exercise. Soldiers particularly should, methinks, all be taught to swim; it might be of frequent use either in surprising an enemy, or saving themselves. And if I now had boys to educate, I should prefer those schools (other things being equal) where an opportunity was afforded for acquiring so advantageous an art, which once learned is never forgotten. I am, sir, &c.

B. FRANKLIN.

GEOLOGICAL CURIOSITY.

Harrison County, Va. October 7.

Within 200 yards from the road leading from Clarksburg up the Elk Creek to Booth's Ferry, and within five and a half miles from the place on the premises of David Hall, a company has been for some time engaged at intervals, in boring for salt; they commenced in the bed of the creek upon a solid rock; at the distance of about 34 feet, they struck a large vein of beautiful water, exceedingly cold, and a little brackish to the taste, which discharges itself at the top of a small gum inserted into the rock, about 18 inches high. At the distance of about 118 feet, they passed through a rich vein or bed of copper about 4 feet in thickness; and at the depth of about 180 feet, they opened a strong vein of wind which instantly found vent at the top of the well in a tremendous roaring and spouting of water throwing up perpendicular columns of that element to the distance of 30 feet! Although the diameter of the well is not more than 2 and a half inches, it is supposed there is no less than 260 gallons of water discharged in one minute of time! for some distance round this perpendicular shoot of water, plays an imperceptible gas of vapour so very inflammable as instantly to take fire whenever that element comes in contact with it. The verge of the circumference of this gas is not perceptible; therefore, those who are not acquainted with its ignitible qualities, the act of putting fire to this curious lamp of nature, have found themselves enveloped in flame, and pretty well singed before they had the idea of being within reach of its touch! It has been tried in vain to extinguish the flame with water.

The only effectual method is to smother it with a large cloth, which can only be applied when the spouting and flame has somewhat abated. The intervals between the times of spouting are uncertain: it has been known to spout two or three times in a week, and may be seen to spout at any time, by putting down the poles after the well has been eight or ten days unoccupied. [*Press.*

THE STRANGE ANIMAL.

It will be recollected, that about a year ago, we published an account of a "strange animal," found in this town. The account met the eye of the Rev. Dr. Harris, of Dorchester, who addressed to us a letter, requesting to be furnished with the skin of the animal for his examination. It was out of our power to do this, as the skin had accidentally been destroyed. We, however, offered a reward for another of the animals, with a view to afford Doctor Harris the desired opportunity of examining it, but it was not until March last that another was obtained. This was taken in the village of East Falls, and by the care and attention of Col. Pope, was transmitted to Dr. Harris. The following description of the animal is from the pen of Dr. H. who very politely permits this paper to be the medium of communicating to the public the result of his inquiries on the subject. The following is an extract of the letter, inclosing the description:—"You will accept my thanks, here repeated, for your kindness in obtaining for me the little creature, and the gratification which the inspection of it has yielded me and others." * * * * "I trust, you will enjoy something from the consciousness of conferring an obligation and enlarging the boundaries of natural science."

"A very curious and beautiful animal was discovered in the month of March, 1825, at Machias, in the state of Maine. It is a *non-descript* species allied to the SOREX Cristatus of *Linnæus*, Radiated Mole of *Pennant*, and of the genus CONDYLURA of *Illiger*. It seems to hold an intermediate rank between the Talpæ (Moles,) and Sorices (Shrew-mice;) having, in its form and habits, an affinity to the former, while its teeth closely resemble those of the latter. Its shape is like that of the mole, but the body is longer, being four inches and a half from the nose to the insertion of the tail, and is three inches and three quarters girth. The head is terminated in a snout, which is naked, having its edges fringed with twenty-two cartilaginous acuminated processes, which surround it, in a stellated manner, like the radii or points of a horseman's spur. The average length of these is five twentieths of an inch; the two superior ones are considerably the longest, and are situated a little in advance of the others. These all seem to be feelers, and may serve to collect or hold the food, or, perhaps, convey it to the mouth by means of the elongation of the snout, which is a kind of proboscis. The neck is so short, that the head appears to be attached to the shoulders. The eyes, though extremely small, and almost concealed in the hair, possess all the organization requisite for distinct vision, but are not adapted to discover objects at a distance. The animal has no external ears, but two small orifices serve as the avenues of hearing. The legs are short, and are five toed; the anterior are scaly, with broad palms resembling hands, and armed with long and straight nails like fingers; and, as the habits of the animal are those of burrowing in the ground, these are admirably adapted for that purpose. The hind feet are placed far back, are a third longer than the fore feet, and are furnished with short slightly curved nails. By their length and position they seem calculated to reach forward and receive the earth which is removed by the fore claws, and push it back, so as to clear the hole which the animal makes for its entrenchments or by digging in search of the worms and insects on which it feeds. It is, indeed, an expert miner, and forms under ground passages for its retreat, and throws up little hillocks for a domicil The tail, three inches in length, and one and a half in circumference at the largest part, is scaly and thinly covered with coarse hairs. It is small at its insertion, but becomes quite large abruptly, and tapers gradually towards the extremity. The skin is clothed with long and very fine hair of a glossy green. This colour, which distinguishes it from all other quadrupeds, is a peculiarity of great beauty, and a most wonderful provision of nature for the security of the animal from the observation of birds of prey, or other enemies, against whose approach its sight and hearing are not sufficient to give warning, nor its limbs agile enough to effect escape. When it emerges from its subterranean recesses, and would be exposed to open danger, it eludes notice and enjoys safety by being undistinguished from the verdant herbage through which it creeps. It is a resident near the borders of brooks or rivers; and lives chiefly under ground, or in meadow-bogs; but also frequents the water, and is said to be a good swimmer.

"This account is drawn up for the gratification of the gentlemen by whose kindness the writer was favoured with an opportunity of examining the animal, sent him preserved in spirits. A more exact and scientific description, by another hand, is prepared for publication in some of our literary journals, in which the non-descript is to bear the name of ASTROMYCTER prasinatus."

Dorchester, Mass. May 10, 1825. [*Eastern Star*

ANSWER TO INQUIRIES, WITH SPECIMENS OF MINERALS AND VEGETABLES.

John S. Skinner, Esq.

I return you the letter from Dr. Howard, of Montgomery, with the specimen of mineral, which I find to be the common pyrites of iron, or sulphuret of iron. I have not considered it necessary to make an analysis of it, as it is sufficiently characterized under its present form. This mineral is common in our neighbourhood in primitive rocks, and cannot be applied to any economical purposes.

The vegetable substance enclosed in your second letter is not so well defined. I believe it to be the "Gentiana lutea," or common Gentian of this country. To ascertain this, however, it would be requisite to have an entire plant, which can be done so as to admit of an accurate examination, by taking up a plant, roots, stem and flowers, and drying it between two sheets of blotting paper.

I have been, and am now much occupied; which I give as an apology for not answering your note sooner. I nevertheless make new offers of my best services.

With much esteem and respect,
Yours, J. T. DUCATEL.

HIGH AND LOW STEAM ENGINES.

During the last ten years, more than one hundred boats, propelled by high steam engines, have been put in operation on the western waters; and among the whole number but four accidents have happened by the bursting of boilers, viz: one in 1817, one in 1818, and two in 1822. In the same period, there have been about forty boats with low steam engines, on which eleven accidents have happened from the same cause. So that if we consider the number of the two kinds of boats, we shall find the comparative safety, as eight to one in favour of high steam: a result which will warrant our backwoods navigators in continuing the use of high steam engines.

To us, the cause of explosion is very obvious, and we will suggest it. There was not a sufficient quantity of water in the boiler to cover the flue; and the top of it becoming red hot, has in that softened state yielded or collapsed—torn loose from the head; and given vent to the boiling water and steam within. This is the way in which all accidents on the western waters have happened; namely, by letting the water get too low in the boilers. And whenever it happens, no kind of metal can resist even a lower pressure of steam than may generally be used in the boiler.

When accidents have happened, it has been too much the practice to impute the fault to the engines rather than to those who superintend them. The bursting of a boiler, or more properly the collapsing of a flue, (almost the only kind of accident that happens,) is generally not the result of the steam's getting too high, but of the water's getting too low. Without wilful carelessness or neglect, serious accidents cannot happen. [*Cin. Lit. Gaz.*

Richmond, May 16.

The Palm of Agriculture.—Yesterday, a curious contest was decided in this city. Last year, eleven farmers from the counties of Amelia and

Powhatan, determined to raise a purse; each contributor to put in $20; the whole to be taken by the one who should produce a hogshead of tobacco to market on a certain day, which should sell for more than the tobacco of his competitors. Yesterday was the day for deciding this singular contest. Nine gentlemen appeared upon the turf, most of them with one hogshead only—three with two—and one with four hogsheads. The tobacco was put up at public auction at Shockœ warehouse—and Mr. Benjamin L. Meade, of Powhatan, obtained the premium—his hogshead selling for $14 75 per the hundred. One of Mr. Charles Eggleston's sold for $14 70; one of Mr. William Eggleston's for $14 65; one of Mr. Hodijah Meade's for $13 95, &c. &c. The whole scene was full of animation, interest, and pleasure.

Soon after the contest was terminated, Mr. Austin Wright had 2 hhds. put up, which sold for $14 65. [*Compiler.*

New Orleans, June 14.

"We have received up to this date, 197,000 bales and shall receive 3,000 more ere the end of the season. Mobile will receive about 60,000 bales, 8,000 of which has been sent here, Pensacola will ship about 4,000; therefore, there will be shipped from the gulf of Mexico, about 250,000 bales during the season. Our exports amount to 170,000. The same quality we shipped you at 18 cents per pound, 10th April, is now worth 28 cents."

The Rensselaer School.—General Stephen Van Rensselaer, of the state of New York, whose name is known to his countrymen as the liberal contributor equally to the cause of humanity and of science, has established, at his own charge, a school for the purpose of instructing persons *in the application of science to the common purposes of life.* This interesting experiment is now going on at Troy, in the state of New York, with every prospect of answering the designs of its benevolent patron and founder.

Burning Springs, emitting inflammable gas, have been lately discovered near Penn Yan, N. Y. Over one of them a tub is placed, and a gun-barrel inserted, from which issues a beautiful flame of a bluish tinge.

We have been informed that a quarry of fine grey *marble* has been discovered in the township of Pike, Bradford county. We have not learned to what extent it is supposed to exist, or other facts relating to it, except that it has been examined by men capable of judging of it correctly, who have declared it to be a fine species of marble.

Another bed of *Iron Ore* has been discovered within six or seven miles of this village, on the Towanda creek, supposed to be more extensive than the one 12 or 13 miles up another branch of the creek. [*Bradford Settler.*

When Doctor Johnson courted Miss Porter, whom he afterwards married, he told her "that he was of mean extraction, that he had no money, and that an uncle of his had been hanged?" The lady, by way of reducing herself to an equality with him, replied "that she had no more money than himself, and though none of her relations had been hanged, she had fifty who deserved hanging."

In the year 1711, Mr. John Steward, (grandfather to a most worthy and highly respectable gentleman now living,) was chosen into the office of parish clerk of a church in the deanery of Readenhall, and which he held till his death in 1762, when the present parish clerk succeeded him, who has ever since filled the office, and that of sexton with it, and is at this time able to do all the duty: he can read the service, ring the bell, and dig the graves, and appears likely to do so for some years longer, although now at the age of *one hundred and thirteen.* [*Essex Herald.*

['This beats old Joe Mog, at Annapolis, "all hollow."]

A Bedford editor has lately mentioned, as an extraordinary performance by a single wagon, the transportation of twenty-eight barrels of flour from that place to Baltimore. A note in the Alexandria Herald opposes to this feat the fact, that *fifty-five* barrels have been hauled, at one load, by a six horse team, from beyond the Blue Ridge to Alexandria—to which might have been added the fact, that the Baltimore road is a much better one than that over which the Alexandria load was hauled.

RECIPES.

FOR MAKING CREAM CHEESE.

Take new milk, and if that should not be enough for the quantity of cheese you wish, take the preceding meal's milk; mix it all together, and as much boiling water as will make it milk warm; then put in the runnet and let it stand half an hour after it comes; then take it out with small hoops, with cloths in them, changing them three times a day, with wet cloths, rubbing them with a little fine salt; after laying 24 hours in that state, put them on dry cloths, still turning them three or four times a day.

TO MAKE CRIMSON COLOUR.

To two gallons of the juice of pokeberries, when they are quite ripe, add half a gallon of strong vinegar, made of the wild crab apple, to dye one pound of wool, which must be first washed very clean with hard soap. The wool, when wrung dry, is to be put into the vinegar and pokeberry juice, and simmered in a copper vessel for one hour; then take cut the wool and let it drip awhile, and spread it in the sun. The vessel must be free from grease of any kind.

TO MAKE GOOD COFFEE OUT OF RYE.

The rye is to be well cleaned, and then boiled till it is soft; but care is to be taken that it does not burst. It is afterwards to be dried in the sun, or in an oven, and then burnt like coffee, and when ground is fit for use. It may be infused and boiled in the usual way; but if coffee equal to Mocha is required, half of this powder mixed with half its weight of real coffee, gives a beverage fit for the Grand Turk, or to be served to the guests at the Coffee Hamblin of the Palais Royale.—*The Chymist.*

TO MAKE RHUBARB SYRUP.

One ounce root of rhubarb, ½ an ounce of jesuits' bark, one large nutmeg; put them into one quart of water, and stew it down to one pint, then add a gill of brandy.

TO PREVENT FLEAS INFESTING ROOMS OR BEDS.

Take a few branches of pennyroyal and hang it up in the room, lay it on or near the bed; or carry a few sprigs in the pocket, and the flea will never make its appearance. This simple preventive has never failed of the desired effect.

CURE FOR THE BOWEL COMPLAINT.

Take a quantity of alder berries when perfectly ripe, press out the juice, set it over a slow fire, add as much brown sugar as will make it palatable; let it simmer until it becomes a thin syrup, and then add one-third brandy, and cork it up for use. One wine glass is a dose for a grown person, and in the same proportion for children. It may be given three or four times a day without the smallest risk.

TO ALLAY HEAT IN EYES.

Beat the white of an egg into water, into which dissolve some refined loaf sugar, and drop some into the eye.

RELIEF FOR CRAMP IN THE STOMACH.

I have seen the most violent cases of cramp in the stomach, immediately relieved by drinking freely of warm sweetened water, when opium, or its various preparations, nor any thing else, would give relief to the patient.

FOR A STRAIN.

Take wormwood and pound it very well in a stone or glass mortar, then put to it as many whites of eggs as may serve to make it up into such a consistence that it may be applied like a poultice to the part affected.

SPORTING OLIO.

NEW MODE OF CELEBRATING THE 4TH OF JULY.

[Communicated for the American Farmer.]

WOODCOCK SHOOTING.

While yet you breathe, away; the rural wilds
Invite; the mountains call you, and the vales;
The woods, the streams, and each ambrosial breeze
That fans the ever-undulating sky;
A kindly sky! whose fostering power regales
Man, beast, and all the vegetable reign.

Of the various modes of celebrating the 4th inst. none that I have seen was more rational and healthful than that which was chosen by a party of six of our best shots. They divided into two parties—Mr. S. H****, Mr. W. G. and Mr. B. chose the fields of Hampton. whilst Mr. W. S******, his partner, Mr. S. and Mr. W. of Bowly's wharf, equally well provided with clean guns and dogs well trained, scoured the Caves, (name of ill omen, it would seem,) in pursuit of woodcock. The first party bagged 24 birds, out of twenty-six or seven—the latter killed but four, birds being very scarce. It is understood that the Hampton party has been challenged to another match as soon as the weather admits. The birds are to be cooked at Mrs. Wintkle's. I shall endeavour to ascertain the result of the next match, and if you publish this, I'll promise you my interest to get you an invitation to the woodcock dinner—but remember, each man brings his bottle.

P. S. I know of no city, the vicinity whereof affords such beautiful grounds for quoiting and fishing parties as Baltimore. Why is it that arrangements are not made to spend our Saturday afternoons in healthful recreations of that sort? Let a club of 20 be made up—divide that into two rival sections, for fishing—let the fish be brought together, and the whole party unite at 2 or 3 o'clock at dinner—and after dinner pitch quoits, or play at cricket, or bowl at nine-pins There is "a time for all things"—for play as well as for work—

> As in successive course the seasons roll,
> So circling pleasures recreate the soul.

If the body did not require relaxation, there would be no occasion to sleep. Why should not the *mind* also? unless, like a stagnant pool, as some men's are, it be too sluggish to move at all, and therefore never fatigued with exercise. By these occasional excursions with dog and gun, and hook and line, in our immediate vicinity, we should avoid the necessity of long expensive tours to neighbouring states.

THE FARMER.

BALTIMORE, FRIDAY, JULY 22, 1825.

AGRICULTURAL CORRESPONDENCE.

[Extract from a letter to the Editor of the American Farmer, at Baltimore, from John Foley, Esq. Post-master, Parish of Assumption, Louisiana. Mr. Skinner requests the particular attention of manufacturers who use the article, to that part of this extract, which relates to the proper time of gathering, and the manner of preparing SUMAC for market. It would prove a source of great profit in many parts of our country, if the subject were properly understood. Editors of New York papers would oblige us by copying the following:]

"We have large tracts of land on this bayou, called brulis, or burns. It has been caused by fire during a dry season, about twenty-five years since. These lands were formerly a thick cane brake, and in consequence of the fire all the large timber was burnt up; it is now grown up with cane and sumac.

"I wish to consult you as to the latter. In the price current of New York, I observe sumac (American,) quoted at $45, and Sicily at $100 per ton.—It grows here very large, and I presume as our climate is somewhat similar to Sicily, the quality must be nearly the same, if gathered and cured at the proper season. I therefore have to request you to instruct me, as soon as convenient, in the best manner of curing it—and as soon as I hear from you, I shall follow your instructions, and forward immediately such a quantity as will enable the manufacturers to judge of its value. This trouble I hope you will excuse. Hoping soon to hear from you on this subject, I am, respectfully,

JOHN FOLEY.

Parish of Assumption, La., June 19, 1825."

We have on file several original essays of much interest and value, which we are waiting impatiently for an opportunity to insert. Amongst others, one from a distinguished planter of South Carolina, that will be very acceptable to all those of our readers who have lately embarked in the culture of cotton—the communication alluded to being a memoir on that subject.

☞The Editor is informed by a correspondent, that Doctor Barton's letter on the natural history of the opossum may be found in the 6th vol. of Annals of Philosophy, new series—a work which he believes is not to be found in any of the public libraries in Baltimore. He would therefore thank any gentleman who would lend him the work, or furnish a transcript of the memoir referred to.

INFORMATION WANTED—for some gentlemen in North Carolina. The Editor of the American Farmer has promised to make the following inquiries, answers to which will be thankfully acknowledged:

"The inhabitants of this place (Elizabeth City,) are anxious to try the experiment of boring for pure water beyond the regions of our alluvial deposits, the apparatus for which cannot be procured in this place. Will you, sir, be good enough to inquire the probable expense of one hundred feet of auger shank, properly jointed, or joined either by screw or keyed, whichever may be most approved, with the auger 2 inches diameter, best calculated for boring through alluvial. Also, the cost of 100 feet of tubes, of 2 inch calibre, so that the auger may work through them, either of cast iron or of sheet iron, whichever is most approved; and whether these materials can be procured on a short notice in Baltimore, and to whom it is most fit we should apply for them."

[We do not know that any such augers are made here, but we should be glad to have information on all the points of inquiry from any quarter.]

RATES OF POSTAGES,

Established by Act of Congress, passed March 3, 1825.

For a single Letter composed of one piece of paper.

	MILES.	CENTS.
For any distance not exceeding . .	30	6
Over 30 miles, and not exceeding .	80	10
Over 80 do. and not exceeding .	150	12½
Over 150 do. and not exceeding .	400	18¾
Over 400 miles, ...		25

Double Letters, or those composed of two pieces of paper, are charged with double those rates

Triple Letters, or those composed of three pieces of paper, are charged with triple those rates.

Letters, composed of more than three pieces of paper, are charged with but triple postage, unless they weigh together 1 ounce avoirdupois, in which case they are charged with quadruple postage, and at the rate of quadruple postage for each ounce according to their weight; their contents, of whatever articles they may be composed, are always included in the weight on which postage is charged; but no packet of letters conveyed by *water mails* shall be charged with more than quadruple postage, unless the same shall contain more than four distinct letters.

Newspaper Postage.

For each Newspaper, carried not over 100 miles, ...	1 cent.
Over 100 miles, ...	1½ "
But if carried to any office in the state in which it is printed, whatever the distance may be, the rate is	1 "

Pamphlet Postage.

Pamphlets, published periodically, not exceeding 100 miles, ...	1½ *cents per sheet.*
Over 100 miles, ...	2½ do. do.
Pamphlets, not published periodically, not exceeding 100 miles, ...	4 do. do.
Over 100 miles, ...	6 do. do.

Letters to Canada, can be forwarded through the agents of the United States at Kingston, Upper Canada, and Montreal, Lower Canada, whether the postages are paid or unpaid.

TOBACCO.—P. Chew, Esq., sold ten hogsheads, being a small part of his crop, for $10 round. For some of the remaining part he refused $13. It was from his Calvert county estate.

Amount of inspections in the state warehouses for the last week, 522 hhds.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9	9 50		
BACON, and Hams, . .	lb.	7	9	10	
COFFEE, W.I. Green, .	—	17½	18	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	29		
Georgia Upland, . . .	—	22	26		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	11	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	35	36		
FISH, Herrings, Sus.	bbl.	2 18		2 25	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 50	4 62½		
Fine, ...	—	4 12			
Susquehanna, superfi.	—	4 38			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	44	46		
Wheat, White, ...	—	90	95		
do. Red, ...	—	80	85		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, Red . .	—	3 75		4	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		30	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	200			
HOGS' LARD, ...	lb.	8	9		dull
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, Havana, .	gal.	24	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7½	8
NAVAL STORES, Tar,	bbl.	1 62		1 87	
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2 50			
OIL, Whale, common, .	gal.	24	26		
Linseed, ...	—	80			
PORK, Baltimore Mess,	bbl	15	15 50		
do. Prime, . . .	—	11 50			
PLASTER, cargo price,	ton.	4 00	4 25		
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 25	3 75		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	26			
PEACH BRANDY, 4th pr	—		82	1	
APPLE BRANDY, 1st pr	—	40			
SUGARS, Havana White,	c.lb.	13 00	13 50	14	16
do. Brown, . .	—	9 50	10		
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	75			
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	2 50		3 00	
Nutmegs, ...	—	2 00		2 25	
Pepper, ...	—	19		25	
SALT, St. Ubes, ...	bush	40			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	2 70	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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EDUCATION.

THE MILITARY ACADEMY
AT WEST POINT.

Memoranda of Examinations of the first class of Cadets, on Civil Engineering, conducted by Professor Douglass, in the presence of the Board of Visiters, June, 1825.

[We profess only to give a sketch of a single examination, chosen for the reason that it will serve to show how closely some of the studies at the West Point Academy are connected with the substantial pursuits and practical business of life.]

The following replies were made relative to the materials and composition of *Mortar:*

Q. Lime?

A. The *lime* chiefly used in constructions, is found in the state of a carbonate in the various kinds of *lime stone;* it is sometimes nearly a pure carbonate, but at others is combined with various proportions of *silex, alumine, magnesia* and the metallic oxids, particularly those of iron and manganese. It is reduced to the state of *quick-lime* by the process of *calcination,* or burning; this expels a part of the carbonic acid, and another portion is afterwards driven off by the addition of water, with which the lime enters into rapid combination: this is the operation of *slaking.*

Q. Hydraulic Lime?

A. The *common,* or *fat-limes,* when used in hydraulic constructions, harden slowly, and in the meantime the mortar is mechanically acted upon by the water; the *meagre,* or *hydraulic lime,* on the contrary, hardens almost immediately. The *former* is obtained from the more *pure carbonates,* and the latter from those which contain certain proportions of foreign ingredients, particularly *iron* and *manganese,* with some silex and a little alumine. *Magnesia* injures the quality of the lime. The *hydraulic* lime does not *slake* readily, like common lime, and is therefore generally reduced to powder, after calcination, by mechanical means.

Q. To which of the *foreign ingredients* is the hydraulic property probably due?

A. There are different opinions on this subject; according to some, the *manganese* is essential; but it has been observed that some very good hydraulic limes, as, for instance, that of the New York canals, do not contain this ingredient. Others consider *iron,* and others again the earthy mixture of silex and alumine as the cause of the rapid hardening.

Q. Sand?

There are *three* varieties of this material, as distinguished according to the *size of the particles.*—The first may be called *gravel,* and the others are *coarse* and *fine sand.* There are *two* varieties, according to the *situation* in which it is found, viz. *beach* or *sea*-sand, and *pit*-sand. The first of these is more purely silicious than the other, and its particles are generally rounded and smoothed by attrition; the second contains a small mixture of clay, and the particles are more rough and angular than those of sea-sand, on both which accounts it is considered as the better material for mortar. It should be used as fresh from the pit as possible, while it yet retains its natural moisture.

Q. Is there any relation between the quality, and the *colour* of sand?

A. The *dark coloured* is generally esteemed the best; it probably contains a small proportion of metallic oxid, which is favourable to the affinity of the lime.

Q. There is a class of materials which are frequently substituted for sand, and are of peculiar use in hydraulic mortars?

A. These are *puzzolano, trass, cement,* and some others of a similar kind. *Puzzolano* is a sort of volcanic sand, obtained chiefly from Italy; it occurs of various colours, but generally inclines to *reddish brown. Trass* is brought from Holland, and is obtained by calcining and grinding a species of basaltic rock, called *moellon d'andernach. Cement* is the powder of red pottery, or high-burnt bricks; *common* bricks will answer, but then they should be burnt over in a reverberating furnace, after pulverizing. All these substances agree pretty nearly in the proportions of *alumine, silex* and *metallic oxid,* which they contain, and when mixed with lime, form mortars which have the property of hardening very rapidly under water, and of enduring for a great length of time.

Q. What are *generally* the proportions of *lime, sand* and *water,* for mortar?

A. For *common mortar, one and a half* parts of *fat-lime,* diluted with *twice and a half* its *weight* of water, is added to three parts of sand. For hydraulic water, *two* parts of *hydraulic lime,* diluted with *its weight* of water, is mixed with *three parts* of sand, cement, or puzzolano. *More lime* is used in the last case, because the *hydraulic lime* is somewhat less strong than the *fat-lime;* and *less water,* because this favours the hardening. These, however, are only general rules—in practice the *quality* and *proportion* of the materials must vary according to the purpose to which the mortar is to be applied.*

Q. What is the theory of the *induration* of mortar?

A. The *lime* takes up carbonic acid from the air, and is re-converted into a carbonate, and the water of the mixture supplies the water of crystallization. The sand gives the requisite hardness and consistency.

Q. What is thought to be the cause of the great hardness and durability of the *ancient mortars?*

A. There are different opinions. Some attribute it to the use of some peculiar ingredient in the mixture; others to the *mode* of mixture, and others to some peculiarity in the method of slaking the lime: the probability is, that the materials were only chosen with great care, and well worked together, and that age has done the rest.

Q. What are the maxims with respect to the strength and adhesiveness of mortar?

A. The mortars of sea-sand and of powdered sand-stone, are observed to be greatly inferior, in point of strength, to those of *cement,* puzzolano, or pit-sand; and of these last, the mortar of *cement,* or a mixture of cement and sharp pit-sand, appears strongest *at first,* and gives, with the exception of the Neapolitan puzzolano, the greatest *increase of strength by age.* Manivation and pressure increase the strength of mortar. With respect to the *adhesiveness* of mortar, it is *inferior* to the *strength* in the *first instance,* but afterwards *exceeds it.*

Q. Describe the mode of preparation, and uses of plaister.

A. Plaister is a sulphate of lime, frequently mixed with a small proportion of carbonate; it is prepared by exposure to heat, which drives off the water of *crystallization* of the sulphate, and calcines the carbonate. When mixed into mortar, it acquires a certain degree of hardness almost immediately, but does not increase in hardness by age, as the common mortars do. It has less strength and adhesiveness than common mortar, and *expands* in hardening, which makes it improper for large constructions. It is chiefly used for inside work.

* * * * * * * * *

TIMBER.

The following replies were given relative to the use and preparation of timber:

Q. What are the principal kinds of timber, and their uses as a *material* and *means* of construction?

A. Timber, as a *material* in constructions, is used for *foundations,* for the *frame-work* of bridges, buildings, &c., and for *inside finishing.* As a *means* of construction; it is also used for *caissons* and *batardeaus* in hydraulic works; for the *centres* of *arches,* for scaffolds and machinery. The principal *kinds* are *oak* of different varieties, and pine, besides which are used in some works, ash, elm, maple, mahogany, &c. Oak is used for strong frame-work and foundations; pine *generally* for lighter work and finishing.

Q. What is the influence of soil and exposure upon the quality of the timber?

A. That which grows upon high hills exposed to the wind, is often stunted, crooked and wind-shaken; that which grows in the valleys, if it have a warm, moist soil is generally *brash.* The best situation and exposure is found on the declivities of hills, with a *southern* aspect; and the best soil, (*for oaks,*) a fat loam *at the surface,* with a gravelly or stony *substratum.* Trees which grow in *open* grounds, are of more *rapid growth,* than those of the woods, but the timber, though of an *even grain,* is generally inferior in point of *strength.*

Q. There are some maxims relative to the time and mode of cutting?

A. The best *seasons* for cutting are either the *depth* of *winter* or *midsummer;* and of these, the *latter* is on some accounts preferable to the former. The tree should be stripped of its bark in the spring previous, to allow the juices to escape, as it is found, when this is done, that the *alburnum* becomes harder, heavier and stronger. Spring and fall cutting are by all means to be avoided.

* * * * * * * * *

ROADS.

The following are some of the replies in regard to the proper principles and materials used in the construction of roads:

Q. Explain the parts and dimensions of a complete road (*in profile,*) and the modifications of profile which are adopted under various circumstances.

A. *Roads,* according to the system of our text, vary in width from 25 to 60 feet between the ditches. They are divided into four classes; the *widest* are used to connect the great commercial cities; the second class form communications from these into the interior; the third, unite places of secondary importance in the interior; and the fourth, are mere cross roads. The parts of the road are, 1st, a carriage-way, paved or *turnpiked* in the centre; 2d, two *sideways* or *wings,* which in highways of the first and second classes are used as *summer roads;* and 3dly, *the ditches.* The road is shaped with a gentle convexity of surface, and in such a manner that the centre is elevated about 1-24th the entire width of the road above the extremities of the profile.—(*See profile No.* 1.) This is the *general* form; but a profile is sometimes used in which only the carriage-way is made convex; the sideways are then sloped *inward,* and separated from the carriage-way by *paved gutters.*—(*See profile No.* 2.) This is favourable for *excavated* roads, as it avoids the exterior ditches, and thus saves a very considerable expense of excavation. When the construction of the carriage-way is such as to render a summer road unnecessary, which is said to be the case when it is made according to M'Adam's method, the side-ways may be dispensed with. In this

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*In mixing the mortar, the *sand* is *first* placed in the mortar-bed and formed into a sort of crater, in which the *lime* is slaked; while it is in the act of slaking, the sand is drawn entirely over it; for it is found that the warm moist vapours of this operation, predispose the sand to incorporate intimately with the lime. As soon as the slaking is complete, the exact complement of water is added, and the whole worked together until perfectly incorporated. It is then used without delay, and the *quantity* of the mixture should be so regulated, according to the *use,* that no mortar is kept more than one or two days at farthest. When it is kept longer, it begins to *indurate,* and in this case, its capacity for *further induration* when used, is proportionably diminished.

case an additional width is frequently made to the carriage-way.—(*See profile No.* 3.) The side-ways are also dispensed with, in all cases of excessive deep-cuttings and steep sidelong declivities, where the economy of excavation is an object.—(*See profile No.* 4.) Sometimes, in very deep cuttings, both the *side-ways* and *ditches* are dispensed with; the carriage-way, in that case, is made *concave.*—(*See profile No.* 5.) But this is objectionable on account of the expense of *paving*, which must then be resorted to; and also, in northern latitudes, on account of the ice which forms in the centre. In profiles arranged for sidelong ground, the road should be made without *convexity*, and with a slight counter-slope *towards* the hill; a ditch is then made at the foot of the excavation, which receives, at the same time, the wash of the hill and of the road, and conveys it off by means of culverts passing under the latter.—(*See profile No.* 6.) In some cases, where the sidelong declivity is very great, the road must be reduced to its minimum width, and supported both on the side of its *excavation* and *embankment*, by *revetment walls.*—(*See profile No.* 7.)

Q. Explain the dimensions and construction of the *turnpiked* carriage-way.

A. It generally varies in width according to the travel, from 18 to 30 feet—its surface is curved according to the general profile, (already described.) In construction, the space occupied by it is dug out to the depth of about 15 inches, rising in the centre in the same manner as the intended superficies of the road. A layer of rough stones of about nine inches diameter is then put down for the foundation; on the top of this, another layer of stones about 3 inches in size is spread, and above this a covering, 3 inches thick, of coarse broken gravel is spread with an iron rake, the edges to be well secured with kerbstones.

Q. What is the theory and construction of M'Adam's road?

A. He proceeds upon the principle, that the natural soil, when properly drained and kept dry, is the best foundation the road can have. In the old method of turnpiking, the site of the road is commonly dug out, and a foundation laid of large stones; this is disapproved of, as being unfavourable to the drainage, and at the same time permitting the rain water to settle into the interstices of the mass. The M'Adam road, instead of being dug out, is *prepared* by *raising* it a little in the middle and sloping it regularly off towards the sides; a layer of clean broken stone is then spread evenly upon it, to the depth of 3 inches, and after it has partially compacted, another layer of the same depth, and afterwards a third, are laid on. The stones are broken so as not to exceed six ounces in weight. Hard stone is the best, and all clay or other matter which could retain the water, must be carefully separated. The fragments must be *rough* and *angular*, or they will not bind together and form a compact mass. The surface of the road is formed so as to decline about 3 inches from the centre to the sides, in a road of 18 feet. More than this would not be advisable, as in that case the carriages would crowd to the centre and form ruts; to prevent which it is recommended to smooth the surface frequently with an iron rake, until the mass is perfectly compact. It is then said to be impenetrable to water, and if the under-water is properly drained off by side ditches, must be equally solid and good at all seasons of the year.

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The following remarks occurred in reply to questions on the *alignment of roads:*

A. The *terminal points* of the road are given, of course, and the most favourable route, when circumstances permit, is the shortest line between them; but in most cases the conditions of the road, such as the accommodation of intermediate points, the convenient passage of rivers, mountains and other impediments, and the choice of the proper ground and materials for construction, require a varied alignment.

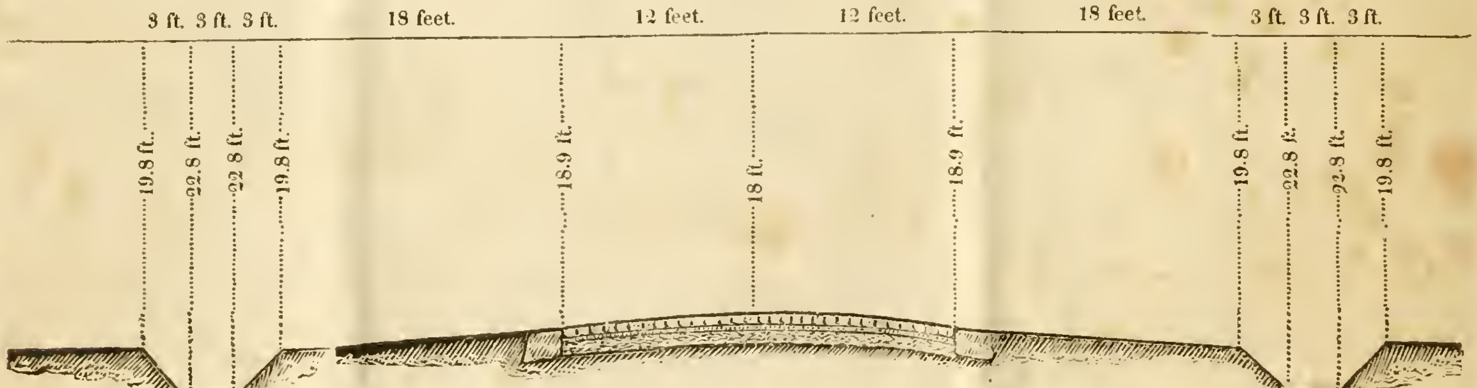
Q. What are the conditions by which the alignment is limited in passing a ridge of mountains?

A. In the first place, the acclivity must not exceed a certain limit; this is taken at a rise of 1-14th in some cases; but in important roads, should not exceed 1-20th, or an angle of about 3 degrees—in some cases, however, it may, without prejudice to the draught, be *increased* a little, near the foot of an acclivity, provided it be *diminished* towards the top. Secondly, the road must be run in such a manner as, in satisfying the condition of acclivity, to avoid as much as possible deep cuttings and embankments. We may have a right line, for instance, drawn from the foot of a hill to the top, which does not exceed the given limit of acclivity; but it would seldom be advisable to build a road upon this line, as the variations in the acclivity of the intermediate ground would frequently require very expensive embankments. To satisfy both conditions, then, it is necessary that *every part* of the alignment, as well as the whole collectively, should come within the required limit; or which is the same thing, the axis of the road in satisfying the condition of acclivity, should be every where contained in the surface of the ground. When any part of the hill is too steep to admit of this by the most direct route, we must vary the alignment, as far as may be necessary, to the right or left, until it becomes more gentle; but if a strict adherence to this method should carry our route too far from the direct line, we may sometimes shorten it by resorting to deep cuttings and embankments. To *run* a line of road according to these principles, we place the *theodolite* upon a point of the alignment, and set the telescope to the given acclivity; we then traverse it in azimuth until the line of sight is parallel to the ground immediately adjacent, (which it will be when the wires cut a station-mark placed at the distance of one or two hundred yards, at the height of the instrument;) this station then becomes a new point of the alignment, at which the operation is repeated—and so on.

Q. When the general direction of a road passes up the line of greatest acclivity of a hill, is there more than one alignment which will satisfy the conditions, and how is the road run in that case?

A. Mathematically speaking, we may go with equal advantage to the right or left, at each operation with the theodolite; there are, therefore, an *infinite number* of alignments which will satisfy the conditions. Such roads are generally run in zigzags, with a greater or less number of *branches*, according to circumstances, taking care to locate the elbows in the most gentle parts of the acclivity, and to give them as gentle a curvature as possible.

PROFILE, No. I.



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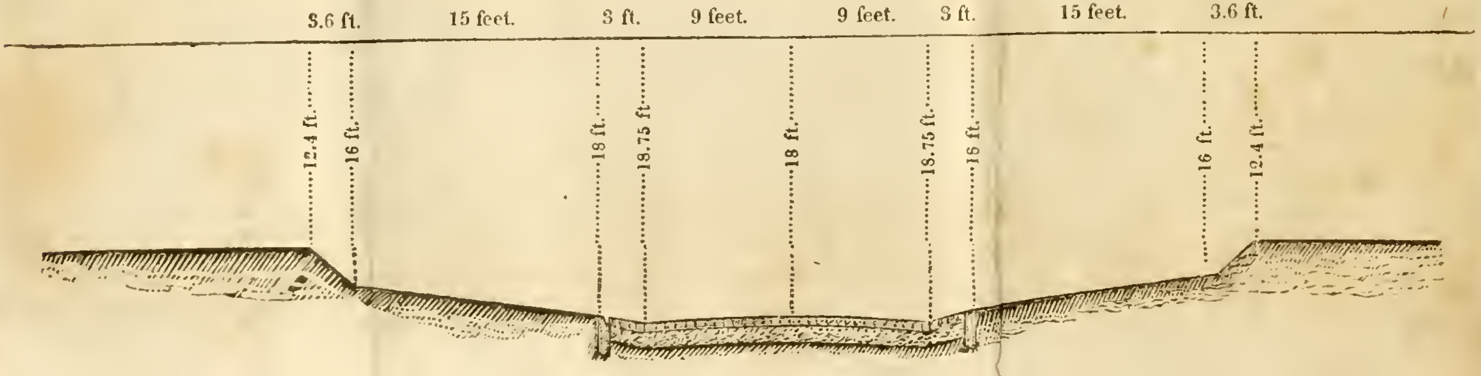

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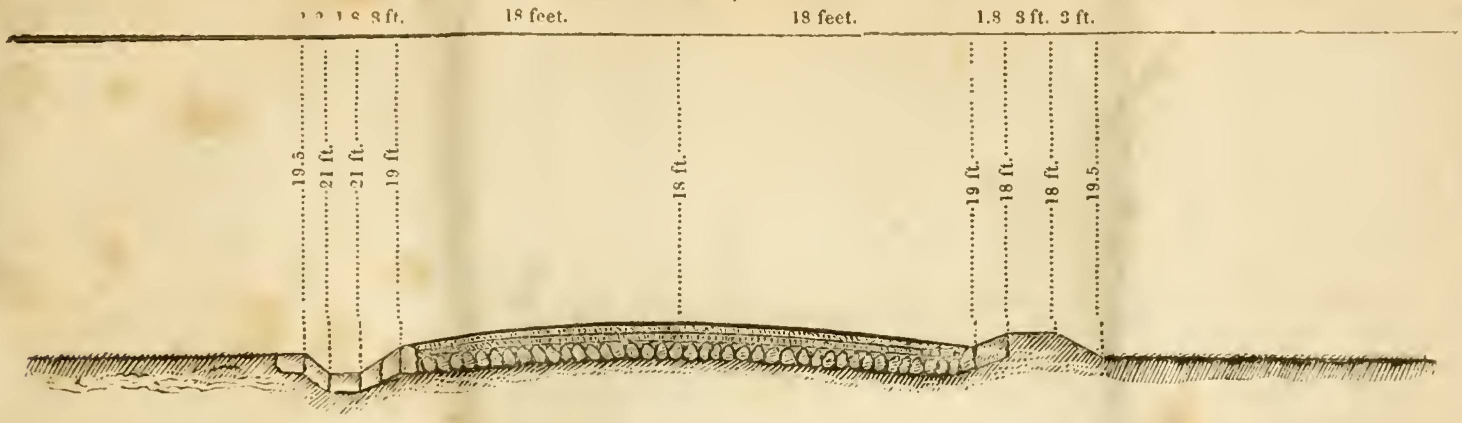

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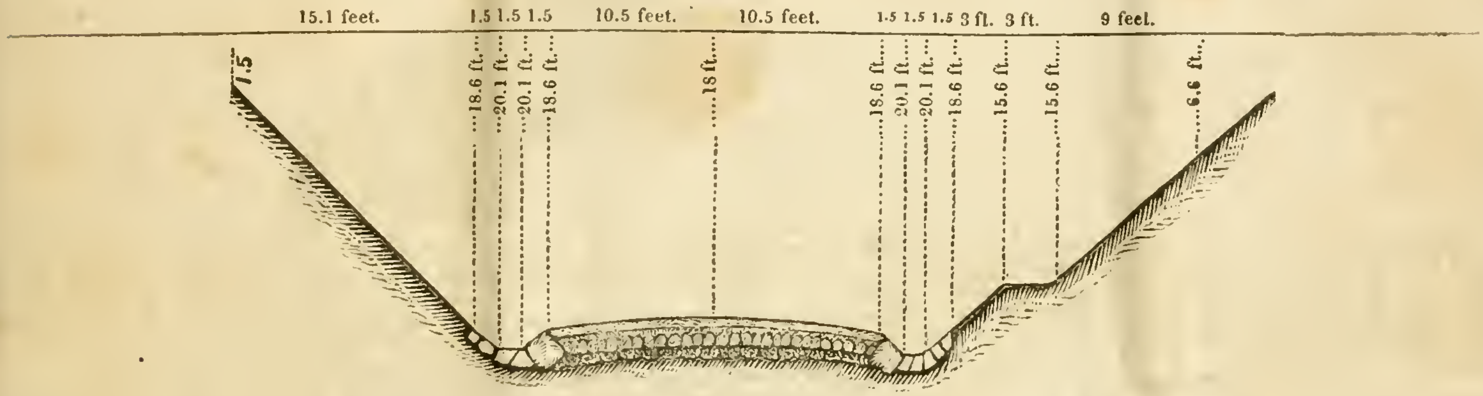

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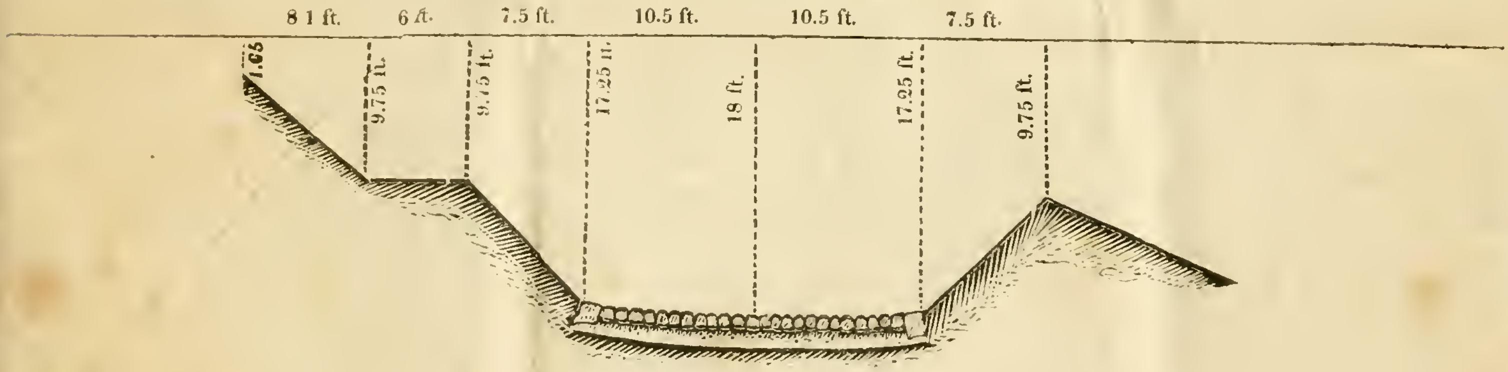

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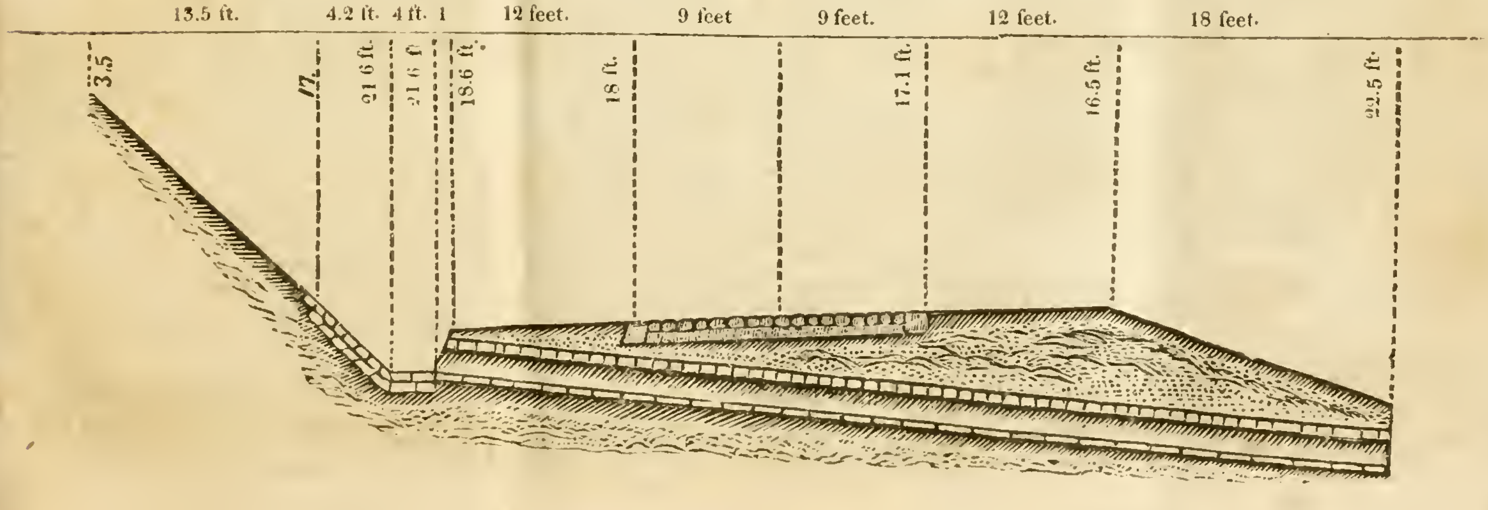

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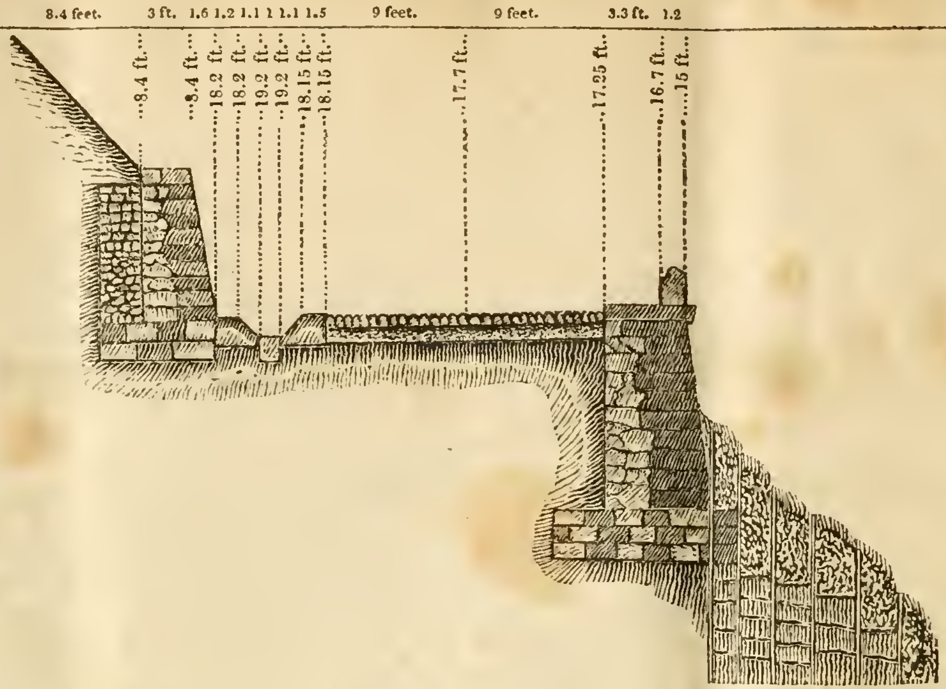

If our readers be not tired of the subject, we shall resume in the next number, the remainder of the course of instruction, which has been interrupted in this number by the foregoing specimens of the examination on civil engineering.

It is equally our wish and our duty to diversify the contents of this journal, as far as practicable, without departing too far from its *land-marks*—and this we apprehend has not been done when treating of timber, good roads, &c. In the mean time we would wish it to be understood, that any subscriber has a right to call for information where it can be had on any particular subject that interests him, and to prompt and promote *discussion*, by appropriate inquiries, where information is not otherwise to be had.

AGRICULTURE.

From the Complete Grazier.

GRASSES BEST CALCULATED FOR MEADOWS AND PASTURES.

Nature has provided in all permanent pastures a mixture of various grasses, the produce of which differs at different seasons. When pastures are to be made artificially, such a mixture ought to be imitated; and, perhaps, pastures superior to natural ones may be made, by selecting due proportions of those species of grasses fitted for the soil, which respectively afford the greatest quantities of spring, summer, latter-math, and winter produce. Sir H. Davy, to whom we are indebted for this remark, has (in the Appendix to his "Lectures on Agricultural Chemistry," p. 375—479,[*]) given the results of a series of most valuable experiments made by Mr. Sinclair, under the direction of his grace the Duke of Bedford, for this express purpose. Want of room compels us to refer the reader to that work: and as some observations on the same topic have already been given in our Section on the culture of grass-lands, we shall in the present chapter invite his attention, first, to the natural grasses annually cultivated: we shall then treat of those wild or uncultivated grasses which are worthy of being cultivated; of the artificial grasses or green crops which particularly deserve attention, and lastly of the vegetables best calculated for fodder, together with the best modes of storing and preserving them.

SECTION I.

NATURAL GRASSES USUALLY CULTIVATED.

1. *Crested Dog's-tail*, (*Cynosurus cristatus*). This grass will be found useful in the formation of upland pastures, as it affords a wholesome food for sheep: it produces a thick, short turf, and flowers about the middle of June. It abounds with seed, which may be easily procured; but attention should be paid that the seed is *ripe*, otherwise it will fail, as was the case with eight bushels which the Rev. A. Young once ordered to be sown on eight acres, and which never came up on account of its deficiency in ripeness.[*] It grows naturally in dry situations, but will not thrive in very wet meadows; and, according to Mr. Stillingfleet,[†] it makes a very fine turf upon dry, sandy, or chalky soils. Sheep and deer are remarkably fond of this grass.

2. *Darnel*, or *Ray-grass* (*Lolium perenne.*)—This valuable grass is now well known and cultivated throughout England; though, from its having been cultivated in improper situations, and from improper seed, a considerable prejudice has been raised against ray-grass. Sheep prefer it to any other grass, in the early stage of its growth; but leave it for almost any other kind, after the seed approaches to perfection.[‡] It is accused of running so much to seed-stalks, that, after a short time in the spring, it is refused by cattle. In a proper soil, however, this is not the case. Darnel abounds with succulent leaves, that are extremely grateful to cattle: it attains the height of two feet, and flowers toward the end of May or early in June; and, by its early springing up, it supplies cattle with wholesome food at a time when it is very difficult to be procured. "Clean hay, made of this grass," says Mr. Sole,[§] "is particularly preferable for race-horses or hunters, as it does not affect their wind, nor blow them as other hay does; and notwithstanding it runs all to bents, yet the juice is so concentrated in them as to afford greater nourishment." He mentions an instance of a fine crop belonging to a Mr. Croom, well got in of which his horses were so fond as to reject clean corn for it. Mr. Pacey of Northleach, Gloucestershire, has within a few years cultivated the natural sort with great success, and to such an extent as to sell a considerable quantity of the seed annually, at 10*s.* 6*d.* per bushel. It has, by competent judges, been proved to be infinitely superior to the cultivated ray-grass, and he has a sufficient demand for his whole produce.

3. *Meadow-fescue* (*Festuca pratensis.*)—The meadow-fescue is an early, perennial, and very hardy grass; thriving with uncommon luxuriance in almost every soil, producing very sweet herbage, which is eaten with avidity by every sort of cattle, making excellent hay, and producing abundance of seed which may be easily gathered. According to Mr Curtis, it bears a very great resemblance to the ray-grass, to which it is in many respects greatly superior, at least for forming or improving meadows; as it is much longer, and more productive of foliage.[*] It flowers about the middle of June.

4. *Meadow fox-tail* (*Alopecurus pratensis.*)—This is one of the earliest grasses produced in our climate: it vegetates quickly, and with such uncommon luxuriancy, that according to Mr. Curtis, it may be well cut thrice in the year. Its stalks are strong, and provided with soft, juicy leaves, of a sweetish, agreeable taste; and, when made into hay, it possesses neither the hardness of straw, nor the roughness and unpleasant taste attendant on some of the grasses. It is, therefore, justly considered as holding the first place among the good grasses, whether used in a fresh state as fodder, or made into hay. Oxen, however, relish it less than sheep and horses. The soil best suited to it is sound meadow-land, occasionally overflowed; though it will succeed on almost any soil, except the extremes of wet and dry.

The meadow fox-tail yields abundance of seed, which may, according to Mr. Martin, be easily procured; but Mr. Swayne states it to be subject to be destroyed by an insect.[*] Linnæus states it to be a proper grass to sow on grounds that have been drained.

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[*] We shall give this in some early subsequent number.

[*] "Communications to the Board of Agriculture," Vol iii. p 145.

[†] Stillingfleet's Tracts, p. 390.

[‡] Sir H. Davy's Agricultural Chemistry, p. 365.

[§] "Letters and Papers of the Bath and West of England Society," Vol. ix. p. 149.

[*] Curtis on Grasses, p. 13.

5. *Smooth-stalked Poa,* or *Meadow-grass* (*Poa pratensis.*)—This grass is one of the finest and most useful of any we have: it vegetates on the driest soils, and may be seen flourishing on the tops of walls. It flowers in May, and possesses the very valuable property of resisting excessive drought, having been remarked to be green in the gravelly pastures near London, when every other grass has been parched by drought. The smooth-stalked poa yields abundance of seed, which, in a separate state, are difficult to sow, on account of their filaments causing them to adhere together. To counteract this inconvenience, Mr. Swayne recommends them to be put into newly-slaked lime, in order to separate them; and Mr. Tullet thinks, that, if they were afterwards well rubbed in a sufficient quantity of dry sand, they may then be sown with proper regularity.

Mr. Curtis says, in his valuable "Flora Londinensis," the smooth-stalked poa is a sweet grass, and readily eaten by cattle in general. It carries its verdure in the winter better than most others, and in the following spring throws out numerous young shoots, so as to make excellent spring food. It produces a good crop of leaves at the bottom, which make exceedingly fine hay, and is fit for cutting early in the spring.

6. *Sweet-scented Vernal,* or *Spring-grass* (*Anthoxantum odoratum,*) is one of the earliest British pasture grasses, and grows in almost every situation, though it is not equally productive: it flowers in May and June. Mr. Swayne thinks it of little consequence, as it is neither very productive to the farmer, nor relished by cattle: it is certain, that cattle will not eat it while they can get at other grasses. Other agriculturists, however, are of a different opinion; and Mr. Sole conceives, that the spring-grass would be a useful addition to meadows, if sown in the proportion of one-eighth.[†] This is the only odoriferous grass produced in our climate, and imparts the delicate flavour perceptible in new hay. It is less productive of seed than many of the other grasses; and Mr. Curtis states, that, in certain situations, particularly in dry seasons, its leaves are liable to become blighted, from a disease which changes their colour to an orange tinge, and which is very hurtful to this vegetable when in a state of cultivation.[‡]

7. *Yorkshire White,* or *Meadow Soft-grass* (*Holcus lanatus,*) is a perennial, flourishing well in any moist situation, and growing very generally, except on moist, barren, and dry soils: it flowers in June and July. It is chiefly calculated for sheep, and has answered uncommonly well, when closely fed. This grass is not much relished by other cattle, and is said to be very injurious to horses, which become affected with a profuse discharge of urine and general weakness. Should any hay made from this grass be accidentally given to these animals, an immediate change of food will prevent any further ill effects. Its foliage is soft and woolly; if not disliked by cattle on that account, Mr Curtis says, it may rank with some of the best grasses. If it were more early, it would be more valuable.

(*To be continued.*)

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[*] Tollet, in "Communications to the Board of Agriculture," Vol. iii. p. 428.

[†] Sole, in "Bath Papers," Vol. ix.

[‡] Curtis's "Practical Observations on British Grasses," p. 7.

ON PLANTING CHESTNUTS.—WHEN AND HOW DONE?

Mr. Skinner,

Sir,—Much is said on the subject of agriculture, the breeding of horses, cattle, sheep; and other useful animals, all of which must be highly appreciated by the friends of their country, but little is said on the subject of the growth of useful timber. While agriculture is improving, it is a well known fact that timber is becoming scarce; so much so, that many farms in this state at this time, are nearly bare of firewood, and quite so of rail timber. Many valuable farms have to be enclosed and divided by *banking* and *wattling with brush,* &c. It is generally known by farmers how valuable *chestnut* timber is, and how long rails made of that noble wood will last. I have heard it asserted that a good chestnut rail, made of young timber, would last from 60 to 70 years, in fact that it will last until it wears away; and it is as well known how quick the growth of the trees are. How easy it would be for every landowner in a few years to have a supply of this timber? provided they would come up and grow from the nut or seed, which can be had in abundance; for many farmers have land that is not fit for any thing else, as it is said poor *worn out land*[*] is as good as any. Some of my friends that have such land are anxious to try the experiment, but wish to be informed how to plant and cultivate them. Say the kinds of soil, the depth to be planted, the time of year when to plant, and the state the nut should be in at the time of planting, whether better to be cultivated in nurseries until of a proper age and size for transplanting, at what age best to be set out, &c. &c. You, as the editor of an agricultural and valuble paper; and an enterprising member of the Agricultural Society, would add to your usefulness by giving the necessary information through the *Farmer* and the different newspapers, or should you not be sufficiently informed on the subject yourself, please ask for the information through the same medium. If this information was given, I would venture to say that hundreds in this state would try the experiment, and if successful, would be of a great and lasting benefit to posterity.

Your obedient servant,
A Friend to Agriculture.

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[*] I hope in a few years we shall have no such land in this state.—Why should not such be resuscitated where the means are so abundant and convenient?

REMARKABLE HEIFER.

Dear Sir, *Annapolis, July* 21, 1825.

Having seen in your last paper an account of the measurement of some cattle of Mr. Powel's, I was induced, (as well as I could understand the manner of doing it from that account,) to measure an heifer of my own raising. She was fourteen months old the fifteenth instant, I measured her on the sixteenth. She has been raised entirely by hand since she was fifteen days old. I think her as fine an animal as I ever saw, indeed, this is the opinion of all who have seen her. I think you saw her when she was four or five months old; and I shall be glad if you will call again when you next visit this place.

From the root of the horns to the extreme end of the rump, - - - -	6 ft.	3 in.
From the same point to the hind part of the shoulder, - - - - -	2 "	4½
From the same point of the shoulder to the hip, - - - - - -	2 "	2
From the same point of the hip to the end of the rump, - - - -	1 "	8½
Girth immediately behind the fore legs,	5 "	4½
From the top of the shoulder to the ground	4 "	0
From the brisket to the ground, -	1 "	7
Across the hips, - - - -	1 "	8
Across the end of the rump, - -	1 "	2
Girth of the fore leg below the joint of the knee, - - - - - -		7½
Do. bend of do. do. - - -		9

I had made arrangements to send her to your last cattle show, but was disappointed.

Yours, very respectfully,
RICHARD HARWOOD, of Thos.

AGRICULTURAL MACHINERY.

Corn Crushers.

ear Sir, *Warminster, 10th July,* 1825.

Some years ago I requested of you some information relative to the best and most approved Corn Crushers, and was favoured with all, then at your command. I have never yet seen a perfect Cast Iron Mill, or Crusher, that would reduce corn to a degree of fineness sufficient to dispense with the millstone. I consider such a discovery a great desideratum in agriculture; particularly on a cheap scale, and capable of being worked conveniently by horse power. I have for some years been engaged in frequent conferences with the Founders, and Millers, and Farmers, in this state, on this subject, but as yet have not accomplished my object. At one time I thought I had got hold of the very best plan. This was to improve on Evans's patent, by making the grinding part very fine, and to cast them in separate pieces, so as to be able to renew them after getting dull, without throwing away the rest of the casting. The exterior grinding surface of the cone, and the corresponding part of the inverted cone, were the parts which, on this plan, were to be renewed. An intelligent miller suggested a change in this plan, which was to have the grinding part of the inverted cone, including its exterior part, cast all in one separate piece, but so as to be adjusted by screws to the upper part of the cone. The cone in both cases was to have the form which it has on Evans's plan, but with projecting points like the Bark Mill. On the first plan, the inner surface of the cone above the grinding parts was to be cast in a fluted form, the ridges running straight up and down. On the last, it was to be simply a square box. I have a plaister mill on the first plan, but with grinding parts too coarse for corn. I employed a workman to execute a pattern on the last plan, but he has disappointed me; and for the present, I shall postpone the execution, on the expectation that some better plan is already in operation to the north. In the course of the investigation, an intelligent founder objected strenuously to the adoption of the form of an inverted cone, because on that plan the ridges converge as the grain descends and grows finer, which he thinks would make the operation too tardy, and have a tendency to choak. This founder preferred the form of the cast iron bark mills now in general use, where the grinding surface expands as the matter to be reduced descends. This machine you know consists of two truncated cones united at their smaller extremities. The objection urged to the form of the bark mill, is that the grinding ridges diverge from each other as the grain descends. To obviate this, the founder proposed to introduce intermediate ridges towards the lower side of the grinding surface. This expedient is not deemed satisfactory by the advocates of the single inverted cone, or the form of Evans's patent; moreover these last contend that the expanding form is objectionable, inasmuch as upon that plan it would be more difficult to renew the grinding surface from time to time, without throwing away too large a proportion of the cast metal. It was also objected that the Corn Crushers made on the plan of the bark mill are too large and too expensive in their prime cost. This objection, however, applies rather to the patterns in actual use in Virginia, than to the form of the machine. To the north, cast iron mills on this plan are made of every size. Such are the arguments prevailing in a small circle of intelligent men in this state with whom for several years I have conversed on this subject. Nothing is doing to solve the problem: nevertheless it is one of great interest to the public. A cheap cast iron mill, moveable by horse power, as an appendage to a wheat machine, capable of reducing corn to meal, and ears of corn to fine hominy, would be an immense acquisition to the agricultural interest. Whatever form may be adopted as the best, different sizes are desirable with a view to different positions in machinery, giving different numbers of revolutions per minute. The nature of the substance to be crushed, also influences the proper velocity of the Crusher; 15t revolutions per minute in a Crusher of about the size of Evans's, answers extremely well for plaister. I have one of those which is worked by two horses, and crushes 12 bushels per hour, so fine as that two-thirds may be used without grinding; and it is impossible to conceive an operation more steady or beautiful. But this velocity would be too slow for corn. It is doubtful with me whether the same crusher answers equally well for plaister and corn. Perhaps a quick motion would suit plaister as well as corn; but I know that a slow motion will do for plaister, and that it will not do for corn. I would suggest four sizes for these mills, to suit 20, 40, 60, and 80 revolutions per minute; 20 and 80 being the minimum and maximum. Were I to select one of these numbers with a view to both corn and plaister, and to convenience of adaptation to a well constructed horse mill attached to a wheat machine, I should choose 40. If the resistance in crushing plaister and corn in the ear were always equal, like that in grinding corn, the greatest velocity would probably be best for all these purposes. The tooth of a cast iron wheel is not so apt to be broken in swift as in slow motions; and this because the momentum of a body increases with its velocity. But in unequal resistances, it would seem necessary to avoid high velocities. Mr. Luther Gale, of Berkshire county, Massachusetts, makes Crushers of every size on the expanding plan. I have seen none of them myself, but some gentleman in Virginia, who had made the experiment, speaks favourably of them. It is probable that he is able to throw light on the questions connected with this subject. He resides near an enlightened Agricultural Society at Pittsfield. The public prints have lately announced that Mr. Henry Baily of Hartford, Connecticut, has invented a Cast Iron Mill, moveable by horse power, capable of grinding 10 bushels of corn per hour, into good meal. Some of the meal made from one of his mills was said to be deposited at one of the hotels in Washington, for public inspection. He promises too much. Nevertheless I should be thankful for any information respecting it, or any intelligence on the subject generally.

I am, dear sir, with great respect,
Your obt. serv't, JOS. C. CABELL.

PROSPECT OF CROPS.

Nottoway Court-House, Va. 18th July, 1825.

The crops of wheat in this section of country will fall very far short in quality and quantity of that of any previous year that has come within my recollection. The causes which produced the diminution in the crop, is attributable in part to a violent hail storm which occurred on the 19th day of May; the fields through which it passed were completely destroyed; the fields which escaped its destructive effects, were so much injured by the hessian fly, chinch bug and rust, that the present crop will not be more than one-fourth of an average crop. Corn crop is promising; the cotton crop very backward, and without a late fall will be short.

MISCELLANEOUS.

ON LIGHTNING RODS.

By Jeremiah Van Rensselaer, M. D.—read before the Lyceum of Natural History, New York.

We hear so frequently of the destruction of lives and property by the effect of lightning, that it is surprising more effectual measures are not taken to guard against its power. In a country where the discovery was made, we should naturally expect to find it in extensive use; and yet England and France are both more zealous than the government of the United States in bringing to perfection the science of Franklin, of whom it was well said,

> Eripuit cœlo fulmen, sceptrumque tyrannis.

The valuable report of M. Gay-Lussac on parratonnerres, or lightning rods, has been published in the Annals de Chimie, and may be advantageously consulted by translation in the Annals of Philosophy. It was drawn up at the instance of the French Academy of Sciences, and offers many very interesting observations.

The means proposed in the 3d vol. of the American Journal of Sciences, p. 347, for the greater security of buildings, are fully adequate to that purpose, and should be extensively adopted. With a view to draw public attention to this important subject, perhaps, the following observations may be serviceable; premising that the papers of MM. Gay-Lussac, de Romas, and Charles, contain a collection of valuable and interesting observations so very generally found in the able and lucid reports made to the French Academy.

It is estimated that the velocity of electric matter, or of lightning, is at the rate of about 1950 feet per second: that it penetrates bodies, and traverses their substance with unequal degrees of velocity; that the resistance of a conductor increases with its length, and may exceed that offered by a worse but shorter conductor; and that conductors of small diameter are worse conductors than those of larger.

The electric matter, too, tends to spread itself over conductors, and to assume a state of equilibrium in them, becoming divided among them in proportion to their form, and principally to their extent of surface; hence a body that is charged with the fluid, being in communication with the immense surface of the earth, will retain no sensible portion of it.

A lightning rod is defined to be a conductor which the electric matter prefers to the surrounding bodies, in its descent to the ground for the purpose of expanding itself, and commonly consists of a bar of iron elevated on the buildings it is intended to protect, and descends, without any divisions or breaks in its length, into water or moist ground.—When the rod is not perfect in its communication with a moist soil, or has breaks in it, the lightning, in its course, leaves it at that spot, for some other near body, or divides itself between the two to pass more rapidly into the earth.

It is proved by the experiments of MM. de Romas and Charles, that the higher the rod is elevated in the air, other circumstances being equal, the more its efficacy will be increased. It is announced that the most advantageous form for the extremity, is that of a very sharp cone. In this country it is usual to have three points diverging—in Europe, on the continent particularly, only one is used, placed perpendicularly.

How far the sphere of action of the rod extends, has not been accurately determined; but it is known that some buildings have been struck even when they had rods attached to them. This, however, has always taken place at a certain distance from the conductor; say three or four times its length.* It is the opinion of M. Charles, that a rod will effectually protect from lightning a circular space whose radius is twice that of the height of the conductor. By increasing the height of the conductor, therefore, the space protected will be enlarged in proportion.

A current of electric matter, whether luminous or not, is always accompanied by heat, the intensity of which depends upon the velocity of the current. This heat is sufficient to make a metallic wire red hot, or to fuse or disperse it, if sufficiently small, so that thin slips of copper nailed to the masts of vessels, afford no security. The heat of the electric fluid scarcely alters the temperature of a bar of metal, on account of its mass; and no instance has yet occurred of a bar, of rather more than half an inch square, or of a cylinder of the same diameter, having been fused, or even heated red hot by lightning. A lightning rod, therefore, need not be of a greater size; but as its stem should rise from 15 to 30 feet above the building, it would not be of sufficient strength at the base to resist the action of the wind, unless it were thicker at that end. An iron bar, about ¾ of an inch, is sufficient for the conductor of a lightning rod.

A lightning rod consists of two parts, the stem which projects above the roof into the air, and the conductor, which descends from the stem to the ground. The stem is proposed by M. Gay-Lussac, to be a small bar of iron, tapering from base to summit in form of a pyramid, and for a height of 30 feet, which is the mean length of stems placed on buildings; the base should be about 2¼ inches square. Iron being liable to rust by action of air and moisture, the point of the stem would soon become blunt; and, therefore, to prevent it, a portion of the top, about 20 inches in length, should be a conical stem of brass or copper, gilded at its extremity, or terminated by a small platina needle, two inches long. Instead of the platina needle, one of standard silver may be substituted. The platina needle should be united by a silver solder to the copper stem; and as it might separate, notwithstanding the solder, it should be further secured by a small collar of copper. The copper stem is united to the iron one by means of a gudgeon, which screws into each: the gudgeon being first united to the copper stem by two steady pins at right angles, is then to be screwed into the iron stem, and secured by a pin.

The conductors should be three-fourths of an inch square, and, as already mentioned, should reach from the stem to the ground. It should be firmly united to the stem, by being jammed between the two ears of a collar, by means of a bolt. The conductor should be supported parallel to the roof, about 6 inches from it, by forked stanchions, and after turning over the cornice, without touching it, should be brought down the wall, to which it should be fastened by means of cramps. At the bottom of the wall, it should be bent at right angles, and carried in that direction 12 or 15 feet.

Iron, in immediate contact with moist earth, soon becomes covered with rust, and in time is destroyed: to prevent this, the conductor should be placed in a trough filled with charcoal, in the following manner. Having made a trench in the ground about two feet deep, a row of bricks is laid on the broad side, and covered by another row placed on the edge: a stratum of charcoal is then strewed over the bottom of the bricks, about two inches thick, on which the conductor is laid, and the trough is then filled with more charcoal, and closed by a row of bricks laid on the top. Iron, thus buried in charcoal, will suffer no change in thirty years. After leaving the trough, it is best to lead the conductor into a well, at least two feet below the lowest water mark. The extremity of the conductor should terminate in two or three branches, to afford a more ready and divided passage to the lightning into the water. If there is no well convenient, then a hole, at least six inches in diameter, should be made 10 or 15 feet deep, and the conductor passed to the bottom of it, in the centre, and the hole then carefully filled up with charcoal, and beat down as hard as possible around the conductor. In a dry soil or rock, the trench for the conductor should be at least twice as long as in a common soil, or even longer, if then it can reach moist ground. Should it be impossible to extend the trench, others, in a transverse direction, should be made, in which are to be placed small bars of iron, surrounded with charcoal, and connected with the conductor. In general, the trench should be made in the dampest, and consequently lowest spot near the building, and the water gutters made to discharge the water over it so as always to keep it moist. Too great precaution cannot be taken to give the lightning a ready passage to the ground, for it is chiefly on this that the efficacy of the lightning rod depends.

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* The length of the stem, and not of the whole rod, is undoubtedly here intended. C. H.

Iron bars being difficult to bend according to the projections of a building, it has been proposed to substitute metallic ropes. Fifteen iron wires are twisted together to form one strand, and four of these form a rope about an inch in diameter. To prevent its rusting, each strand is well tarred separately, and after they are twisted together, the whole rope is tarred over again with great care. Copper or brass wire is, however, a better material for their construction than iron. If a building contain large masses of metal, as sheets of copper, or lead on the roof, metal pipes and gutters, iron braces, &c., they must all be connected with the lightning rod, by bars of something less than half an inch square. Without this precaution, the lightning might strike from the conductor to the metal, especially if there should be any accidental break in the former, to the very serious injury of the building, and the danger of the inhabitants.

Lightning Rods for Churches.

For a tower, the stem of the rod should rise 15 or 25 feet, according to the area; the domes and steeples of churches being usually much higher than surrounding objects, do not require so high a conductor as buildings with extensive flat roofs. For the former, therefore, their stems, rising 6 feet above the cross or weather cock, will be sufficient; and being light, may be easily fixed to them, without altering their appearance, or interfering with the motions of the vane.

Lightning Rods for Powder Magazines.

These require to be constructed with the greatest care. They should not be placed on the buildings, but on poles at 6 or 10 feet distance. The stem should be about seven feet long, and the poles of such a height that the stem may rise 15 or 20 feet above the building. It is also advisable to have several lightning rods about each magazine. If the magazine be in a tower, or other very lofty building, it may be sufficient to defend it by a double copper conductor, without any stem. This is done on the European Continent. As the influence of this conductor will not extend beyond the building, it cannot attract the lightning from a distance, and will yet protect the magazine, should it be struck.

Lightning Rods for Ships.

The stem of a lightning rod for a ship consists merely of a copper point screwed into a round iron rod, entering the extremity of the top-gallant mast. An iron bar, connected with the foot of the round rod, descends down the pole and is terminated by a crook or ring, to which the conductor of the lightning rod is attached, which in this case is formed of a metallic rope, connected at its lower extremity with a bar or plate of metal, and which latter is connected to the copper sheathing on the bottom of the vessel. Small vessels require but one; large ships should have one on the mainmast, and another on the mizen mast.

It has been proposed to have conductors fixed to the surfaces of the masts, and the electric fluid conveyed by means of strips of metal, over the deck and sides of the vessel. But this mode is highly objectionable; and perhaps the best method yet devised, is to convey the electric fluid from the mast head to the surface of the water, in a direct line, by means of a series of long copper links. It has come to my knowledge, within a few months, that a vessel in the gulf stream with powder on board, was struck by lightning and blown up, in consequence of the conductor not reaching the water, having been *loose*, and drawn on deck.

It is allowed, from experiment, that the stem of a lightning rod effectually defends a circle of which it is the centre, and whose radius is twice its own height. According to this rule, a building sixty feet square requires a stem only fifteen or eighteen feet, raised in the centre of the roof. A building of one hundred and twenty feet, by the same rule, would require a stem of thirty feet, and such is often used; but it is better, instead of one stem of that length, to have two of fifteen or eighteen feet, one being erected thirty feet from one end of the building, the other at the same distance from the other end, and consequently sixty feet from each other. The same rule should be followed for any larger or smaller building.

[*Silliman's Journal.*

THE FALLS OF NIAGARA.

Travelling has got to be so easy and cheap, that many people seem to think it more expedient to shut up house and go off, than to stay at home, even on the score of expense. The current running now to the east is like the return of the Gulf stream. Those whose trunks are not yet packed may profit by the following table of distances from Baltimore to Niagara and Quebec.

Distance from Baltimore to the Falls of Niagara.

	Miles.	
Philadelphia,	100	
New-York,	100	
Albany,	160	
		360
Schenectady,	16	
Amsterdam,	15	
Tripe's Hill,	6	
Cachnewaga,	5	
Paletine,	18	
St. Johnsville,	4	
Manheim,	3	
Little Falls,	7	
Herkimer,	7	
Utica,	15	
1st day's journey from Albany,		96
Vernon,	16	
Lennox,	12	
Chetenengo,	5	
Manlius,	12	
Jamesville,	5	
Onondaga,	10	
Skaneatelis,	16	
2d day's journey from Albany,		76
Auburn,	7	
Canandaigua,	37	
3d day's journey from Albany,		44
Victur,	10	
Pittsford,	11	
Rochester,	9	
Palma,	11	
Murray,	7	
Gaines,	11	
4th day's journey from Albany,		59
Ridgway,	13	
Hartland,	11	
Cambray	12	
Lewistown,	15	
Falls of Niagara,	7	
		58
		698

From the Falls to Quebec.

Lewistown,	7	
Fort George,	7	
York,	33	
Kingston	170	
Prescott,	70	
La Chine,	130	
Montreal,	9	
Quebec,	170	
		696

From Quebec to Baltimore.

Montreal,	170	
St. John's,	27	
Shoreham,	150	
Ticonderoga, (village)	8	
Caldwell,	35	
Albany,	61	
New-York,	160	
Philadelphia,	100	
Baltimore,	100	
		805

It will take, without hurry, about four weeks to make the tour, and cost about one or two hundred dollars. It ought not to exceed one; but as the trimmings sometimes cost more than the coat, so it is in travelling; more is spent in fine clothes, fine wines, &c. &c. than would defray the mere expenses of comfortable travelling.

RECIPES.

CURE FOR THE BITE OF THE VIPER, RATTLE-SNAKE, &C.

In great cities, particularly in London, a number of persons procure their livelihood by catching vipers. They are employed by chymists, apothecaries, &c. I remember some years before leaving England, to have read in the Royal Society in London, a curious circumstance of one of these viper catchers. A member of the society had received casually, information that a man engaged in this business was frequently bitten, and that he cured himself by sweet olive oil. After a considerable inquiry the viper-catcher was found, and the questions asked whether he did cure himself by the oil, and whether he was willing to satisfy a number of gentlemen of the fact? The man answered in the affirmative to both questions. Accordingly, a very numerous meeting of the Royal Society was convened, composed of a considerable number of nobility, &c., the viper-catcher attended, accompanied by his wife and a large viper, and laying his arm naked to the shoulder, suffered the irritated reptile to strike, which it did very forcibly. His wife permitted the poison to operate till her husband's head, face and tongue were greatly swollen, his arm and face turned very black, and his senses much affected, when she applied the oil by pouring a small quantity down him, and bathing the part bitten.—The man gradually soon recovered. This circumstance being strongly impressed upon my mind, and knowing the poison of an English viper is considered in that country the most venomous in nature, determined me to try its power in the bite of a rattle-snake, the first opportunity that should offer in the district I reside in. In 1766, I was travelling through Pendleton, S. C., and met a man who inquired of me, if I could assist to relieve the pain of a person who had been bitten by a large rattle-snake. Although sorry for the man's misfortune, I rejoiced at the opportunity I had offered to ascertain fully the properties of olive oil, as an antidote to this deadly poison; having a phial of this oil in my pocket, I hastened to the suffering creature; and on seeing him, his appearance struck me as the most frightful object I ever beheld. His head and face were extremely swollen, and the latter black; his tongue proportionably enlarged, and extending out of his mouth; his eyes appeared as if they would shoot from their sockets; his senses gone, and every appearance of immediate death. He had been bitten on the side of the foot. I immediately, but with great difficulty, poured down him two table spoonsful of the oil. Its effects were almost instantaneous, and exceeding powerful in counteracting the poison, as appeared by the strong, though quick convulsions, which followed. In about 30 minutes it operated strongly, both as an emetic and cathartic; after which the swelling of the head, face, &c.,

gradually abated, and the tongue began to assume its place. In two hours he was so far recovered as to articulate, and from that time recovered fast, till he got perfectly over it. The oil inwardly taken, and externally applied, did not exceed seven spoonsful. The number of cases of the like nature, in twelve years, has been considerable, in which olive oil has proved itself to be peculiarly adapted and fully adequate to the worst of cases, if timely applied. It is a remedy which every person can command, (when others cannot be procured,) and ought not to be without; indeed, many cautious persons have carried a small phial of oil constantly about them. It has also been used with equal success when horses, cattle, dogs, &c. have been bitten. One case, I am credibly informed, has occurred, where the olive has succeeded, when given a woman who had been bitten by a small dog, and who exhibited strong symptoms of hydrophobia. I can hardly excuse myself of criminal neglect in having so long omitted to make thus public this sovereign remedy for the worst of poisons. The knowledge of the efficacy of the olive oils, abundantly diffused in the district of Pendleton, and partially so in some of the adjoining districts, and wishing it to be known generally, caused me to write these remarks for publication. [*Augusta Constitutionalist.*

SPORTING OLIO.

Baltimore, July ?5, 1825.

JOHN S. SKINNER, ESQ.

Dear Sir: In your paper of the 22d inst. I find my initial introduced under the head of "Sporting Olio," as having spent the 4th on a shooting party. I did join two other gentlemen on that day to visit the Caves, but having missed our way, did not arrive at the shooting ground until near 10 o'clock—when, ascertaining that birds were very scarce, our hunt lasted only about two hours.

We were not aware that the Hampton party was out, there was no match made, nor has there been any proposed to me; I never have been engaged in one, and although I like occasionally to spend a leisure hour in the field with a friend and my gun, I have no wish to have it recorded.

Very respectfully,
W.—— of Bowly's wharf.

[An interesting communication under this head, signed B. will appear in our next.]

THE FARMER.

BALTIMORE, FRIDAY, JULY 29, 1825.

Our notice of the Academy at West Point has occupied much more space than was anticipated.

IMPORTANT ARRIVAL.—The Yorkshire Cleveland Bay Stallion, and Mare, presented by Admiral Sir Isaac Coffin, to the Massachusetts Agricultural Society for promoting Agriculture, have arrived at Boston in good health and condition. The circumstances of their presentation and arrival, are thus appropriately communicated by our esteemed friend in New England.

"The Cleveland Bays have arrived, the horse is only *two* this spring and mare *four*. The season being now over, he will not be allowed to mares till next spring, and will then be full young; he is very handsome and in high order, quite large, you will see our advertisement of them in the New England Farmer of to-morrow; we know not one word of cost or charges, the Admiral has done the thing nobly. The animals with all charges and a Groom to attend, whose passage he pays back, (if he inclines to return,) to the landing on our wharf is paid by him, the freight being generously offered to us last spring by our Packet Agent.

"The mare is also a large bay, black mane, tail and legs, she walks fast, but presume they are not *quick** travellers, they must be well calculated for the *coach*, and capital for *farm purposes*, being strong built; she has worked hard this spring, and came 300 miles to Liverpool, is therefore low in flesh."

[* It is their cross with the blooded horse that will give us the splendid animal for quick draught, they will give size, bone, and muscle, and the true blood of the English Racer; such as are to be found in highest purity and perfection at Roanoke, Va. will give foot and bottom. It is of the greatest importance to have got the *mare*, to enable us to preserve the full blood; it is to be hoped she has been stinted by a different horse of the same breed —EDITOR AMERICAN FARMER.

THE VINE AND WINE

On the subject of planting and cultivating the grape vine, and making wine, recourse may be had with great advantage to "a Memoir on the Cultivation of the Vine in America, and the best mode of Making Wine, by John Adlum." It may be had of Messrs. Davis & Force, in the city of Washington, at 75 cents—but booksellers and others, who purchase to sell again can have them at a liberal discount.

In Major Adlum's Memoir, he has introduced or copied every thing which he deemed necessary from M'Culloch's work on Wine:—that work costs $2 25, while Major Adlum's Memoir costs, as above stated, but 75 cents.

AGRICULTURAL DEPOSITES,

In the office of the American Farmer.

DEAR SIR, *Bloomsbury, July 23, 1825.*

I have just received by the brig Alfred, from New Orleans, a small box containing samples of the different varieties of cotton in bowl. The office of the *Farmer* being a repository of every thing curious or interesting in agriculture, I have the pleasure to send you the package, with a hope that it may serve to gratify some of your agricultural friends.

Yours truly,
H. V. SOMERVILLE.

TOBACCO.—A small crop of J. Bond's, of Calvert county, sold this week for $5 and $10—another crop from Prince George's, about a dozen hogsheads, one of which was second, sold for $11·37½ round.

Amount of inspections for the last week in the three state warehouses, 277 hhds.

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The Military Academy at West Point, Memoranda of Examinations on Civil Engineering—Grasses best calculated for Meadows and Pastures—On Planting Chestnuts, when and how done—Remarkable Heifer of Mr. Harwood's—Agricultural Machinery, Corn Crushers—Prospect of Crops—On Lightning Rods, by Jeremiah Van Rensselaer—The Falls of Niagara, distance from Baltimore—Recipes, cure for bite of the Viper, Rattle-Snake, &c.—Sporting—Arrival of Cleveland Bays at Boston—Editorial—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9	9 50		
BACON, and Hams, . .	lb.	7	9	10	
COFFEE, W.I. Green, .	—	17½	18	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	29		
Georgia Upland, . . .	—	22	26		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	11	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	35	36		
FISH, Herrings, Sus.	bbl.	2 18		2 25	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 50	4 62½		
Fine, ...	—	4 12			
Susquehanna, superfi.	—	4 38			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	44	48		
Wheat, White, ...	—	90	95		
do. Red, & Lawler	—	80	87		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, Red . .	—	3 75		4	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	200			
HOGS' LARD, ...	lb.	8	9		dull
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, Havana, .	gal.	24	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7½	8
NAVAL STORES, Tar,	bbl.	1 62		1 97	
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2 50			
OIL, Whale, common, .	gal.	24	26		
Linseed, ...	—	80			
PORK, Baltimore Mess,	bbl	15	15 50		
do. Prime, . . .	—	11 50			
PLASTER, cargo price,	ton.	4 00	4 25		
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 25	3 75		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	26			
PEACH BRANDY, 4th pr	—		82	1	
APPLE BRANDY, 1st pr	—	40			
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	9 50	10		
Louisiana, ...	—	9	10 20	10	12
Leaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	75			
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	2 50		3 00	
Nutmegs, ...	—	2 00		2 25	
Pepper, ...	—	19		25	
SALT, St. Ubes, ...	bush	40			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	2 70	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

MEMOIR ON THE HESSIAN FLY.

An Historical and Physiological notice of the Hessian Fly, read before the Agricultural Society of Albemarle, in Virginia, on the 2d March, 1818—and afterwards communicated by Thomas M. Randolph, senior, of Virginia, to George W. Jeffreys, Esq., of North Carolina, and by him sent to J. S. Skinner, for insertion in the American Farmer.

Col. Sylvester Dering, of Shelter island township, Suffolk county, Long island, saw the Hessian fly in his wheat as early as the 1st day of June, 1786. In 1787, they destroyed all his early sown wheat, but a piece sown after the 9th day of October yielded a good crop. All his spring wheat, and barley, were also destroyed that year. He saw the insect in his oats, but no harm was done to them by it. He observed, when the number of worms or grubs of the insect, on any infested plant, was very considerable, that it perished thoroughly. When there was a few only, many roots continued to grow and produced ears notwithstanding the injury; but when such ears began to acquire weight from the increase of the grain they contained, they invariably fell, with the stalks which supported them, a short time before harvest. In such cases, the worms and grubs were always larger than when more numerous and more crowded. He found that the flax seed-like grubs remained in the stubble from early in June until the middle of September, at which time they appeared to him to be hatched very generally. The worms or maggots seemed to be sluggish, and almost inanimate, or capable of very little perceivable motion. He entertained some doubt whether they first made their appearance as real eggs, or perfect maggots, very closely enveloped, but produced by a viviparous parent. That they obtained the juice of the wheat altogether by suction, and merely caused dents in the stock, without having any means of corroding or consuming it, he was well convinced.

Jonathan N. Havens, a very enlightened farmer of Shelter island, was also well acquainted with the Hessian fly in 1786. In the winter of that year, Col. Dering and himself demonstrated to the public that the insect resembling the Hessian fly, which then abounded in the granaries among the wheat in sheaf, and in chaff, was quite different from the fly of the fields, and not in the slightest degree injurious to the grain. The alarm produced in Canada, and even in England, by the accounts published of the destructive nature of the Hessian fly, and its supposed identity with the insect found in granaries in America, had very nearly caused a total prohibition of American wheat from both countries. No doubt was entertained in council, either in London or in the Province, of the necessity of such a measure. But the delay which arose from its importance, gave the American government time to make use of the information obtained on the subject, to show that it was, in truth, as unnecessary as it would be prejudicial to the interests of both. Thus was an evil of the greatest magnitude to an agricultural people averted, by the first effects of an incipient taste for natural history, in two plain, observing, and reflecting farmers. In the spring of 1787, they joined in an investigation of the insect, with a view to learn its nature and habits under all its different appearances at different seasons. The flies began to appear on the farm of Mr Havens that year as early as the 16th of April. Between that time and the 10th of May, they were continually coming forth and laying their eggs. All the growing wheat and barley on Shelter island that year was destroyed. For two succeeding autumns nothing but rye, and what yellow-bearded wheat could be procured, was sown there The harvest of that kind of wheat was very good in 1790, but the fly reappeared in immense numbers in 1791, which Mr. Havens attributed altogether to early sowing the preceding autumn. It appeared afterwards that the duration of the laying season, both in spring and autumn, depended very much on the weather and the winds which prevailed and which seemed to regulate the swarming of the flies. Mr. Havens entertained the same doubt with Col. Dering whether the first stage was a real egg or a maggot. He also thought the worm incapable of locomotion, and was equally certain that it procured nourishment by suction or absorption of sap, and not by tearing the stalk or leaf. The injury was evidently produced by the mutual and reciprocal pressure of the worm, or grub, and the stalk, both daily increasing in size and strongly embraced by the leaf, which forms a sheath containing them. The tender side of the hollow stalk being at length forced inward by the pressure of the grubs, frequently on opposite sides at the same time, became too weak to bear the weight of the ripening ear. The exhaustion of sap in the young wheat, from the suction of the numerous worms, seemed to them to cause the damage done in autumn. They observed that the grubs in the boot of the leaf at the joints of the stalk much above the surface of the earth, which might be removed with the sheaves, were not all destroyed in threshing out the grain. Many remained uninjured on the straw, and might be transported with it, so as to cause a propagation of the insect in other countries. The time of continuance in the grub stage was found to depend very much upon the state of the weather. Under the most favourable circumstances for transformation which the season could afford, they, nevertheless, invariably remained grubs from early in June until late in August. If about the 25th of August they enjoyed that particular degree of heat and moisture most suitable to them, the transition commenced and was very rapid and general. When kept quite dry, they continued unchanged until October. Their transformation was protracted by damp and cold weather. Grubs collected from the growing wheat in June, and from the stubble after harvest, when preserved in glass vessels under gauze, were found to become flies about the same time, indiscriminately The period of change seemed to be within the limits of the time, between the 25th day of August and the middle of October. In that interval, the number of flies abroad in the air, at any one time, depended upon the state of the atmosphere then prevailing. Although their observation had not fully confirmed the fact when they wrote their account, yet Mr. Havens and Mr. Dering deemed it quite probable that the autumn transformation, from unsuitable weather, might be in some degree incomplete; and that numerous grubs, which had been produced from eggs laid one spring, might occasionally remain in the dry stubble until the spring following. They were quite certain that the fly, which came out from the flax-seed like coat (which may be called the skin of the grub,) at any time before harvest, did not live to appear again in autumn. It was their opinion, that the fly itself took no nourishment from the wheat, at any time.

To Mr. Havens is certainly due the credit of the first discovery, that the Hessian fly species exists at midsummer in the grub state only, protected by that tough and retentive air-tight cover, which it has the means of making for itself from a viscous and filamentous secretion, always attending complete nutrition—secure within which it bears, without injury, the heat and dryness, and occasional wetness, to which it is exposed throughout the summer months, during its abode in the dead stubble. That it passed the winter, for the most part, as a caterpillar, imbedded in the green wheat, and drawing nourishment from its juices was before known Mr. Dering and himself were fixed in their belief, that nearly the whole autumn brood must fail, if there should be no wheat, barley, or rye, above ground, to receive their eggs, earlier than the middle of October. They proposed to destroy all stubble, either by burning or ploughing under, immediately after harvest, or as soon as practicable before the 25th day of August. They thought it quite probable that a peculiar odour of the blade, in some particular varieties of wheat, might be disagreeable to the insect in the fly state, and might cause a preference of other kinds, if sufficiently near, and of an age equally fit to receive the eggs. Of course a selection for seed was worth the attention of farmers. But no kind could succeed, in their opinion, which would not bear late sowing, and *that* plainly required an improved husbandry, More tillage, earlier and better performed; more manure, better compounded and prepared, and sooner turned under furrow, had become indispensable for wheat crops.

George Morgan, of New Jersey, published a letter on the subject of the Hessian fly, addressed to a "Gentleman Farmer of Virginia," dated July 31, 1788. He had observed that the insect in the aurelia or grub state, called by farmers flaxseed, lived in straw during the winter. He found, that unmixed and imperfectly rotted barnyard manure, when spread on land, multiplied the flies to an astonishing degree. He recommended the use of compost manures, and rolling wheat, both in spring and autumn. That operation he thought good culture required, for other reasons than to crush the maggots and grubs of the insect, which he believes it did in a considerable degree.

Top-dressings of lime, or fresh ashes, given at the time of rolling, he believed to be not only useful in the way of manure, but destructive to the insect; yet the practice required caution, for the wheat might be destroyed by the application in excess. The yellow-bearded wheat was not affected by the fly, within his experience. The red, and white-bearded wheats, resisted it no better than the smooth-eared kinds. With respect to the cause of that peculiarity, without offering any conjectures, he remarked, that to attribute to hardness of stalk could not be satisfactory, as many kinds were destroyed before they had any stalk. He took some pains to trace the origin, in America, of that variety of wheat, without success. In April, 1782, a cargo of it was brought to Underhill's mills, near Flushing, to be manufactured into flour. At the period when the inquiry became a matter of interest, all endeavours to determine whence it came, were unsuccessful; owing, possibly, as Mr. Morgan said in his printed letter of July 31st, 1788, "to a contraband trade having been carried on during the war, between the Delaware, the Chesapeake, and New York, under passports from British admirals, which caused a reluctance to give the information desired." Mr. Morgan understood from the millers that it was of a more oily nature than other kinds of wheat, and required to be more carefully aired, and to be ground older, and drier, to make good flour. In a letter addressed to Sir John Temple, then consul-general for his Britanic majesty in the United States, dated the 26th August, 1788, Mr. Morgan said, "I have satisfied myself that the Hessian fly was introduced into America by means of straw, made use of in packages, or otherwise landed on Long island, at an early period of the war. Its first appearance was in the neighbourhood of Sir Wm. Howe's debarkation, and at Flatbush. It spread from thence in all directions, with the summer breezes. In 1786, it had reached the fields around Princeton, in New Jersey."

Mr. Ezra L. Hommedieu had ascertained in 1791, that the insect in the grub state, was to be found in the stubble at harvest; and inferred that it might have been brought from Germany, where the stubble is often mowed for litter, after the crop has been reaped. He found by experiments, that the time of the continuance of the insect in the grub state, was uncertain, and was liable to be determined by circumstances of a variable nature. Grubs taken a month before harvest, and others taken during harvest, both kept in separate glass vessels covered with gauze, were equally forward in their transformation. He saw that the fly, some way, contrived to pierce the leaf to escape. the opening it made was plainly perceptible without a glass. Both the yellow-bearded and red bald wheats, were seriously injured in his neighborhood (- - - - - - - - -) in 1791, even on the richest lands; which he attributed to the great multiplication of the insect that year, from causes he did not pretend to assign.

John Shephard was the first who discovered that the eggs were often deposited in the upper leaf, next the ear, where they hatched and became grubs, which were found lodged between the leaf and the stalk, above its upper joint. Of course, the insect in the grub state, might be transported in straw (as it certainly goes into the barns with the sheaves,) if it should not be destroyed in threshing.

Before the 23d of June, 1791, Doctor Samuel Latham Mitchell had already sent specimens of the insect, in the different states, to Sir Joseph Banks, President of the Royal Society in London, and to Dr. Walker, Professor of Natural History in the University of Edinburgh. Before the 10th September, 1791, Dr. Mitchell had already written to Mr. L. Hommedieu, informing Mr. L. H. that he had received a letter from Sir Joseph Banks, assuring him that the insect was unknown in England; and that he did not believe it ever had been observed in Germany, or any where on the continent of Europe. Dr. Mitchell afterwards received the same assurance from Dr. Walker of Edinburgh.

It was the opinion of Doctor Mitchell that late sowing, and manure, were the only preventives. *He* did not expressly recommend burning stubbles. He had no confidence in bearded wheat to resist the insect, and thought it was as often destroyed as any other kind, within his own observation. He believed that wheat to be the same with the clog wheat, or rivets, of England, which he stated to be the worst kind cultivated there, being worth least, by two or three shillings the quarter, in the cheapest times. Dr. Mitchell agreed in the account of the insects' first appearance, viz. in 1776, near the place where the army of General Howe landed on Long island.

Joseph Moore, of Westchester county, state of New York, had observed the insect, with some attention, before the year 1792, but more particularly that year. He found the greatest damage was done to spring wheat, much to all kinds of wheat, very little to rye or barley, within his observation; none to buckwheat or Indian corn. He saw the female insects in the act of depositing their eggs, in the manner of the locust, by piercing through the leaf, where it embraces the stalk not far from the joint. The eggs deposited in April did the most mischief. In 1792 there came forth three distinct generations, between early spring and the beginning of July.—He believed the rolling of wheat in spring might be beneficial, but acknowledged the degree of efficacy, in the destruction of the insect, to have been very inconsiderable in the experiments which he had witnessed. He asserted that the Hessian fly had not reached Lancaster county, Pennsylvania, in July, 1792.

The same Joseph Moore pronounced the mildew on wheat to be caused by a peculiar insect, very minute, and incalculably numerous, which laid their eggs on the leaves and stalks throughout whole fields. He observed them attentively in 1792, from the 12th day of June, when they first appeared. The damage done by them became manifest in 5 or 6 days. Bearded wheats were much less affected than smooth kinds, under like circumstances

Richard Waln, in 1792, made the observation, that a few warm days early in spring, brought out a swarm of Hessian flies, which were little affected by any subsequent cold, and deposited their eggs in a few days after their first appearance, if the weather continued favourable to them. He observed that the caterpillars, and grubs of the insect, produced from the eggs deposited very late in the spring, did not hinder the formation of ears of wheat, but the stalks bearing ears under such circumstances, never failed to fall prostrate, just before harvest, as if trampled down. He had not much reliance on the power of any variety of wheat to resist the insect, but trusted fully to manure, good tillage, and late sowing, to counteract its destructive effects.

Dr. De Normandie, of Burlington, remarked, that the insect in the grub state, concealed in the straw of the troop ships, of Sir Wm. Howe's fleet, in 1776, must have been forced into transformation by the warmth of the bodies of the soldiers. by whom it was used to take their rest upon long before the passage was over. He believed the insect to be indigenous, and attributed the immense multiplication of it to a sudden, and perhaps, accidental change from the plant on which it had before deposited its eggs, no doubt one of spontaneous growth, and probably afterwards extirpated in the progress of cultivation, to wheat, which afforded the young caterpillars abundant nourishment and safe hybernation, while it invited the flies to spread over the whole continent. He had great confidence in the power of the bearded wheat to resist the impression of the grub, on its (as he supposed,) solid, hard and unyielding stalk. He acknowledged that he could never see the eggs of the insect with certainty.

Mr. James Vaux, previous to the 13th day of June, 1792, when his communication to the Philosophical Society on the subject was dated, had repeatedly seen the female insect in the act of depositing the egg. He observed that in the female, the extreme part of the abdomen tapered to a point, and was shaped like the tail of a locust; and although without the hard appendage of that insect, was firm enough to penetrate the leaf of the wheat where it envelopes the stalk. The males were found to be much like a very slender and gaunt house fly. He saw the females changing their place, as if searching for softer parts of the leaf, and remarked that when once fixed, they were very intent and not easily disturbed. After the eggs were laid, the leaf appeared raised, or swoln, at the place; and the protuberance might be distinctly felt with the finger. On opening the sheath, the eggs might very plainly be seen with a good glass. They appeared, at first view, like a speck of jelly, of a dirty white. Mr. Vaux noticed clearly three generations in one season, and believed that there might be many more; the increase depending upon the state of the atmosphere. He applied the burning glass to the grub or flax-seeds, and found that a degree of heat, no greater than a rapidly passing flame, destroyed them all with certainty, by bursting their red cover, which is a tight sack, that resists the expansion of the air within, until rent by it. He relied much, of course, upon burning stubble.

Mr. James Logan, of Salem township, Westchester county, state of New York, in a letter to Mr. Rittenhouse, dated July 7, 1792, asserted that the female insect was armed with something like a sting, or aculeus, with which it pierced that part of the leaf of growing wheat which is folded around the stalk, and deposited within, not eggs, but as he supposed, living maggots, enveloped at first in a thin film cover. That they subsisted afterwards upon the sap of the stalk, which they obtained by suction, and increased rapidly in size. They were white until full grown, and then assumed a green central stripe, stretching lengthways through them, broadest in the middle, plainly visible to the naked eye. After much observation, he fixed his opinion, that the worm, or maggot, had no locomotion whatever; he could not perceive that it contracted, or expanded, when touched with a needle, or immersed in water. He found that the fly appeared in the first warm days of spring, and that there was a succession of generations, hatched, nourished, and metamorphosed, until harvest, within shorter periods in more favourable weather, with a surprising fecundity, which exhibits them in incalculable numbers in all stages of their existence, and of all ages, throughout the whole time. James Logan was of opinion, that the effluvia from well prepared manure had a tendency to repel the fly; which he believed also had a disrelish for some particular varieties of wheat, and avoided such, as much as possible, while laying its eggs. He found a kind of wheat, called by farmers black wheat, to possess equal or greater power of withstanding the fly than bearded wheat, and yet the stalk of that variety is perhaps the most tender of all. He had no doubt of the insect being a native of America. He thought that it formerly subsisted upon some plant of spontaneous growth, which had lately become so rare, that the pregnant fly was compelled to seek another nidus for its eggs, with other substances for its young; when it unluckily made the calamitous choice, of wheat. This observer does not appear to have had the advantage of a magnifying glass, and of course has left the question about the locomotive power of the insect, when first hatched, entirely unsettled, notwithstanding his own conviction on the subject.

David Redick declares, in a letter dated June 20. 1792, that the Hessian fly had already appeared about Washington, in Pennsylvania, on the Susquehanna, 300 miles west of Philadelphia, although then entirely unknown in the interjacent country, farther than a few miles from Philadelphia, in that direction. He did not hesitate to assert, that it was brought from Jersey, in the straw used to pack their wagons, by the annual emigrants from that state to the interior of Pennsylvania.

Dr. Caspar Wistar communicated to the Philosophical Society, an experiment made by one of his intelligent agricultural friends, whom he was not allowed to name, to determine the efficacy of grazing early sown wheat to prevent the injury of the fly. Having a field of fifteen acres, on his farm in Jersey, which had been very early sown and was very forward, so full of fly as to threaten its total destruction, he put into it eight cows and forty-four sheep, before the blade had begun to perish. The crop failed the next summer, nevertheless; yet the blade was wholly consumed by the animals, which were not removed until snow had fallen.

Professor Davy, of England, has discovered, that the wheat plant secretes a sugar-like matter, as in the germination of the grain in malting, about every joint of the stalk; and also at the lower extremity of every shoot which is destined to be a stalk, at the point of its junction with that knot-like substance in which the ascending and descending members of the plant unite, and seem to take their origin. It is quite probable, that the sugar so produced, is the natural food of the caterpillar of the Hessian fly; and that the mother fly retains sufficient remembrance of its early existence to determine the choice of a plant to receive its eggs, which may furnish food for the young when hatched. The individual fly, when pregnant, probably seeks for that plant which formerly nourished itself, but is often compelled to resort to a different variety of the species, or to a different plant. Where the natural food does not exist, the whole young brood, of course, perishes.

Thus it is perhaps that barley, rye, timothy grass, and some species of Panicum, afford a nidus to the Hessian fly, while the oat does not; or rears none to return to the species when they feel that want. So perhaps the yellow bearded wheat, and other kinds, at one time rejected by the laying insects, become afterwards, to other generations equally the object of choice, from accidental compulsory adaption at first. As the caterpillar is thought by many to have a progressive motion, and its saccharine food is found, indeed it may be generally seen itself, in the lower end of the young shoot, at the crown of the root; grazing sufficiently close to destroy it, would evidently destroy the plant with it. Until the newly hatched worm was seen by General Cocke, in its progress to find its natural cradle in the tube formed by the blade, it had been supposed that all the eggs which were laid perished, except those deposited within the boot by the mother insect, or such as might be carried down the funnel shaped leaf, by dew or rain, to the joint. The eggs which are laid on very young wheat, are no doubt placed exactly where the caterpillar is found, in such cases, at the bottom of the first shoots from the root.

John Hartwell Cocke, Esq. of Fluvanna county, Virginia, Brig. Gen. of Virginia militia; one of the vice-presidents of the Agricultural Society of Albemarle, has been unquestionably, as far as we know at present, the first to discover the locomotive power of the young caterpillar of the hessian fly. The torpor which it invariably displays, after it is imbedded in the wheat, and has commenced its eating stage of existence, had misled, upon that point, all observers, during the first period of the inquiry; yet the analogies from which the contrary might have been infered are numerous. That of the moth-weevil, is one of the most striking. The fly of that insect lays its eggs whenever it can do so, either in the field, in the stack, or in the barn on the upper extremity of the grain of wheat, which has always a soft and short hair like cover; but it often also scatters them over the chaff, which envelops the grain while in the ear. The eggs, as those of most insects, stick wherever placed, by means of a glutinous substance which always adheres to them, and which becomes when dry, a varnish for their protection from the air. They are quickly hatched in a suitable temperature. The young caterpillars, while yet invisible, without a good glass, find their way to the grain, penetrate the husk, which becomes afterwards bran, imbed themselves in the flour, feed, grow to their natural size, transform to grubs, then flies; enjoy the social state for a few days, and in seasons very favourable to their increase, multiply so much as to rob the farmer of all the flour, and leave him nothing but bran, chaff, and straw in his stack yard. This caterpillar however, is far from being inanimate, or even sluggish while feeding and growing. Its motion may be discerned as soon as it can be perceived by the naked eye, and is always sensible, except in very cold weather, until it is about to become a grub, when it lies quite still, and indeed its ability to move progressively is at last only presumed. It never has been seen *in transitu*. Whether all the eggs perish, except such as come in contact with the tuft at the end of the grain, or the newly hatched creature has the power to seek a cradle for itself, is not yet certainly known.

WHITE FLINT WHEAT.

Auburn, Cayuga Co., July 20, 1825.

Mr. Skinner,

As there has been much said in your useful paper as to the origin of the white flint wheat, perhaps it might be of use to say something as to its peculiar qualities. It is a fact, that those who have raised it the longest, are most in favour of it. The season with us has been remarkably good for all kinds of wheat; yet the white flint wheat surpasses all other kinds. The proper time to test its peculiar excellence is in unfavourable seasons for wheat, as it is a harder plant and has peculiar qualities to withstand a hard winter, and the ravages of the fly in the spring and summer. The only objection I ever heard any one making to it was, that it was hard to thresh; but we that have raised it some time, consider it a favourable circumstance, as we can harvest our other grain, and let the flint stand eight or ten days after it is ripe, and experience no injury by its shelling or growing in the field. The *rust* never strikes it, nor does it shrink by falling down; and it answers well to sow again after wheat. I last September collected a quantity of the white flint for seed, and sent to different parts of this state, and to Vermont, where they had raised but little wheat for many years, on account of the insect and the winters. I have heard from most of the places where I sent wheat, and the information is, that the white flint wheat excels all other kinds, and bids fair to be a sure crop, where the cultivation of wheat had been almost totally given up. I have selected and sold to Robert Sinclair, of your city, (Baltimore,) 500 bushels of excellent clean seed, where the farmers of your state can be supplied—and to them I can cheerfully recommend it.

Yours, respectfully,

IRA HOPKINS.

[We should suppose that it would now be easy to obtain a knowledge of the peculiar qualities of this wheat, as tested by *our own soil and climate*, so much having been sowed last year in this state and Virginia. Yet no one in this state, though publickly invited, has written even a line, to state matters of fact and observation in regard to it. In a company of practical farmers, the other day, who had all cultivated this wheat, we heard it maintained by some, that General Cocke was right in identifying it with the lawler wheat—and by others, that there was an obvious difference. When men of experience thus disagree upon subjects susceptible of being decided by actual inspection and comparison, it does not any longer follow that "seeing is believing," and there can be no longer any want of room for discussion in matters of agricultural *fact*, more than in metaphysics. As to the asserted solidity of the stalk, those which we have seen were hollow as other wheat.] Editor American Farmer.

SHEEP HUSBANDRY.

[The following sales were recently made, not to speculators, but to people who "count the cost" of all they buy—to gentlemen who can tell you the cost of rearing sheep, and their nett profits. Their states abound in flourishing manufactories, where the cash is advanced for wool at saving prices. How many thousands of acres in the western parts of Pennsylvania, Maryland and Virginia, might be profitably employed in sheep husbandry, that do not now more than pay *taxes*, much less interest. Few of the purchasers in the following cases, probably own more than from 1 to 300 acres.]

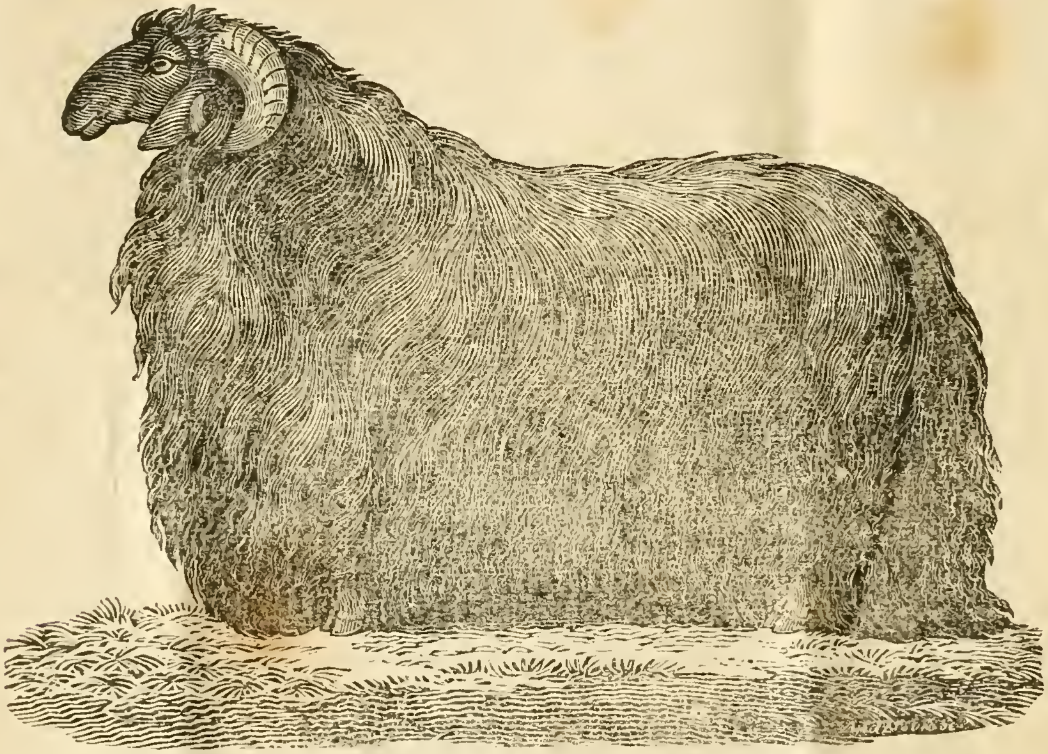
GREAT SALE OF SAXONY SHEEP.

The following is a list of the sheep sold at Brighton, Mass. on Thursday, July 14th, by Messrs. Coolidge, Poor & Head, with the names of the purchasers, their places of residence, and the prices for which the sheep were sold.

1.	Ewe, S. Henshaw, Boston, Mass.	$147	50
2.	Do. C. Sharp, Windham Co. Con.	122	50
	Lamb, do.	61	25
3.	Ewe, Peter Remsen, New York	137	50
4.	Ram, S. Henshaw, Boston	240	00
5.	Do. do. do.	230	00
6.	Do. Griswold, Litchfield, Con.	235	00
7.	Do. T. Thaxter, Boston	152	50
8.	Do. do. do.	160	00
9.	Ewe, Gorham Parsons, Brighton	95	00
10.	Do. J. H. Newcomb, New York	205	00
	Lamb, do. do.	102	50
11.	Ewe, I. Thorndike, jr. Boston	110	00
	Lamb, do. do.	55	00
12.	Ram, Gen. Davis, Poughkeepsie	210	00
13.	Do. J. M. Peck, Boston	220	00
14.	Do. Hinsdale, Bennington, Vt.	220	00
15.	Ram, S. Lathrop, West Springfield	$225	00
16.	Do. S. Whitman, Hartford, Con.	200	00
17.	Ewe, Gen. Davis, Poughkeepsie	125	00
18.	Do. F. Wright, Otsego, N. Y.	95	00
19.	Do A. A. Moore, Albany Co.	130	00
	Lamb, T. Thaxter, Boston	60	00
20.	Ram, H. Swift, Dutchess Co. N. Y.	155	00
21.	Do. do. do.	302	50
22.	Do. Judge Pendleton, do.	317	50
23.	Do. do. do.	335	00
24.	Do. I. Thorndike, jr. Boston	160	00
25.	Ewe, Watson, East Windsor, Con.	65	00
26.	Do. J. M. Peck, Boston	145	00
	Lamb, Do. do	72	50
27.	Ewe, A.A. Moore, Rennselaerville, Albany, Co.	205	00
	Lamb, J. Thorndike, jr. Boston	60	00
28.	Ewe, do. do.	100	00
29.	Ram, Leonard Davis, Poughkeepsie,	215	00
30.	Do. Eldridge, Otsego	155	00
31.	Do Judge Pendleton, Dutchess Co.	210	00
32.	Hulbert & Co. Winchester, Con.	170	00
33.	Ewe. Watson, East Windsor	85	00
	Lamb, do. do.	42	50
34.	Ewe, do. do.	87	50
35.	Do. A. A. Moore, Rennselaerville	120	00
36.	Ram, J. Munson, Boston	220	00
37.	Do. L. Hinsdale, Hinsdale, Ber.	185	00
38.	Do. Eldridge, Otsego,	180	00
39.	Do. E. Lee, Salisbury, Con.	175	00
40.	Do. W. Randall, Con.	195	00
41.	Ewe, Hulbert & Co. Winchester, Con.	85	00
42.	Do. S. Whitman, Hartford	100	00
	Lamb, J. Chase	30	00
43.	Ewe, C. Parsons, Brighton	92	50
44.	Ram, Watson, East Windsor	148	00
45.	Bronson & Co. Winchester, Con.	225	00
46.	Do. A. A. Moore, Rennselaerville	175	00
47.	Ewe, T. Thaxter, Boston	130	00
	Lamb, do. do.	65	00
48.	Ram, B. Whipple, Berkshire Co.	150	00
49.	Ewe, Gen. Davis, Poughkeepsie	130	00
	Lamb, do. do.	65	00
50.	Ewe, do. do.	165	00
	Lamb, J. Chase	55	00
51.	Ewe, I. Thorndike, jr. Boston	175	00
	Lamb, do. do.	50	00
52.	Ram, do. do.	225	00
53.	Do. C. Tracy, do.	225	00
54.	Do. Newcomb, New York	230	00
55.	Do. Pendleton, Dutchess Co.	425	00
56.	Do. A. A. Moore, Rennselaerville	185	00
57.	Ewe, L. Davis, Dutchess Co.	130	00
58.	Do. A. A. Moore, Rennselaerville	165	00
	Lamb, J. Chase	57	50
59.	Ewe, A. A. Moore, Rennselaerville	140	00
60.	Do. T. Thaxter, Boston	110	00
	Lamb, do.	55	00
61.	Ram, Judge Pendleton, Dutchess Co.	450	00
62.	Do. Gen. Davis, Poughkeepsie	230	00
63.	Do. Watson, East Windsor	170	00
61.	Do. Hulbert & Co. Winchester, Con.	230	00
65.	Ewe, Gen, Davis, Poughkeepsie	150	00
66.	Do G. Parsons, Brighton	145	00
	Lamb, do. do.	72	50
67.	Ewe, Hulbert & Co. Winchester	110	00
68.	Ram, B. Buck, Lanesborough, Mass.	165	00
69.	Do. G. Germaine, Lansingburgh, N.Y.	223	00
70.	Do. Gen. Davis, Poughkeepsie	315	00
71.	Do. Griswold, Litchfield, Con.	222	50
72.	Do. Gaylord, Goshen, Con.	210	00
73.	Ewe, I. Thorndike, jr. Boston	150	00
	Lamb, do. do.	75	00
74.	Ewe, A. A. Moore, Rennsclaerville	100	00
75.	Do. J. Mason, Boston	107	50
	Lamb, do. do.	53	75
76.	Ram, Eldridge, Otsego	145	00
77.	Do. Britton, Clarendon, Vt.	210	00
78.	Do. Bronson & Co. Winchester	205	00
79.	Do. Watson, East Windsor,	170	00

80.	Ram, L. Hinsdale, Berkshire	$215 00
81.	Ewe, Eldridge, Otsego	92 50
82.	Do. S. Bemis, Watertown	150 00
	Lamb, do. do.	75 00
83.	Ram, Hulbert & Co. Winchester	225 00
84.	Do. A. A. Moore, Rennselaerville	230 00
85.	Do. Jona. Mason, Boston	180 00
86.	Do. Geo. Ayre, Groton	335 00
87.	Do. S. Germaine, Lansingburgh	162 50
88.	Do. N. Houghton, New York	200 00
89.	Do. Ewe, E. Lee, Salisbury, Con.	92 50
	Lamb, S. Williams, Hampshire	27 50
90.	Ewe, Chase	87 50
91.	Do Eldridge, Otsego	101 00
92.	Ram, A. A. Moore, Rennselaerville	215 00
93.	Do. Barnes, Rutland, Vt.	200 00
94.	Dō. Wright, Otsego	185 00
95.	Do. A. Cotting, Boston	220 00
96.	Do. H. Swift, Dutchess county	270 00
97.	Ewe, S. Henshaw, Boston	117 50
	Lamb, do. do.	52 50
98.	Ewe, I. Thorndike, jr. Boston	100 00
	Lamb, do. do.	50 00
99.	Ewe, A. A. Moore, Rennselaerville	150 00
	Lamb, A. A. Moore, Rennselaerville	$ 52 50
100.	Ram, Gen. Davis, Poughkeepsie	320 00
101.	Do. G. Parsons, Brighton	207 50
102.	Do. E. Sharp, Windham	332 50
103.	Do. Hinsdale, Hinsdale, Bermuda	310 00
104.	Do. E. Lawrence, Long island	340 00
105.	Ewe, do. do.	235 00
106.	Do. A. A. Moore, Rennselaerville	130 00
	Lamb, W. Barnes, Rutland, Vt.	45 00
107.	Ewe, Houghton, Boston	162 50
108.	Ram, P. Remsen, New York,	310 00
109.	Do. J. Chase	225 00
110.	Do. J. Prince, Roxbury	280 00
111.	Do. Hulbert & Co. Winchester, Conn.	250 00
112.	Do. A. A. Moore, Rennselaerville	275 00
113.	Ewe, Watson, East Windsor	85 00
114.	Do. J. Munson, Boston	142 50
115	Do. Watson, East Windsor	92 50
116.	Do. Newcomb, New York	110 00
	Lamb, J. Prince, Roxbury	37 50
117.	Ram, J. Mason, Boston	220 00
118.	Do. Hulbert & Co. Winchester	205 00
119.	Do. McLane, Tolland, Conn.	180 00
120.	Do. J. Mirick, Pittsfield	210 00
121.	Ewe, J. Shepherd, Northampton	$132 50
122.	Do. Thaxter, Boston	100 00
	Lamb, do. do.	50 00
123.	Ewe, J. Chase	87 50
124.	Ram, Eldridge, Otsego	207 50
125.	Do. J. D'Wolf, Rhode island	210 00
126.	Do. Mosely do.	125 00
127.	Do. S. Welles, Greenfield, Hamp.	212 50
128.	Do. Jackson, Sudbury, Vt.	195 00
129.	Ewe, E. Sharp, Windham	46 00
	Lamb, do. do.	23 00
130.	Ewe, Thaxter, Boston	120 00
	Lamb, do. do.	60 00
131.	Ewe, Judge Lawrence, Long island	102 50
	Lamb, Guid, Newton,	42 50
132.	Ewe, S. Bemis, Watertown	92 50
133.	Ram, Judge Lawrence, Long island,	212 50
134.	Do. Watson, East Windsor	210 00
135.	Do. J. Mason, Boston	185 00
136.	Do. Mosely	217 50
137.	Ewe, Thaxter, Boston	120 00
	Lamb, do. do.	60 00
138.	Ewe, F. Wright, Otsego	57 50

[*N. E. Farmer.*



THE CARAMANIAN, OR CAMBLET-WOOLLED SHEEP.

The Caramanian, or Camblet-Woolled Sheep, of which the above is an excellent representation, is on W. Shotwell's farm, at Woodbridge, New Jersey, and was imported in the Charles & Ellen, Capt. Gerry, which arrived this spring from Smyrna; he is from Caraman, in Asia Minor, taken from on board a Turkish vessel bound to Constantinople, and presented to Captain Gerry by the Greek Admiral Tombazo, who assured him that he was a native of the above place, and that he would be a great acquisition to improve the breeds in this country. Their wool is peculiarly adapted to the manufacture of camblets, and their flesh is esteemed excellent and delicate. This animal has a broad tail, and the natural colour of the wool is dark brown or snuff colour; the fleece, before shearing, dragged on the ground, (except under the belly,) so as completely to hide the feet, and weighed twenty-one pounds. He is in prime condition and sound health, the size greater than any of the largest sheep of our country. The head is beautiful; the eyes piercing and quick in motion; no fleece beyond the ears: the head appears to project out from the fleece, having the resemblance of the dark brown short fur on the deer's head; the horns are handsomely seated and of the middle size.

John Brentnal, an English farmer of high standing, residing in Woodbridge, in a letter to William Shotwell, of New York, dated 10th June, 1825, says he took 21 lbs. wool from him; that he would have produced from 4 to 5 lbs. more, had he not have been robbed; that there were several places of five to six inches square from which the wool had been taken; further, he is extremely gratified with the frame of the animal; that he is large and perfect, his limbs well proportioned; his skin extremely delicate and white; his strength great; and he has no hesitation in saying, this very extraordinary animal will prove of much greater advantage to our breeds of sheep than the Merino or any other hitherto introduced; that as he is but three years old, he will undoubtedly increase in size, and produce a still more abundant quantity of wool; observing that its superior size, the weight of the fleece, the length of the wool, and the quality of the flesh, cannot but be the best recommendation; and says, to ascertain the quality of the flesh of a sheep is by the smell. A person handling a buck of the Merino, English, or American breeds, will find his hands extremely offensive, which was not the case in shearing this; on the contrary, his fleece and flesh were perfectly sweet. He recommends shearing twice a year.

DISEASE IN CATTLE.

TO THE EDITOR OF THE AMERICAN FARMER.

A disease has made its appearance amongst the horned cattle in our neighbourhood, which threatens us with very serious inconvenience. We are first apprised of its existence by finding the animal lame, and upon examination, find the membrane or fleshy part in the division of the hoof, sore entirely through, attended with so much suffering to the animal, that if an ox, he is unable to labour. We have tried spirits of turpentine, sweet oil, and fish oil, mild salves and soap suds, with but little benefit. The disease appears to be contagious. Any useful information upon this subject would be thankfully received by several SUBSCRIBERS.

July, 1825.

AGRICULTURAL PROSPECTS.

New Jersey, 25th July, 1825.

With the exception of a smart shower on the 3d of July, we have had no rain since the 23d of June. Every thing has gone back, excepting peach trees, grapes and rose bushes. The peach trees with me seem to thrive with the drought, I never saw them look so thrifty, but there is not a single peach. The frost and sleet destroyed almost all the fruit, what little was left has since been stung by the pinching, or as it is called, the night pinching bug. As to the yellows, I cure my trees by throwing ashes around the roots, and trimming and shortening the limbs. The yellows always succeeds, that is, a tree that is afflicted with the yellows, has had a very vigorous growth the preceding year, owing to numerous causes, such as a rainy season and manure. A summer of drought will give those, or a portion of those trees, the yellows, that grew very vigorously the preceding year. Let your correspondents be aware of this fact, and they will find my observation just. The reason is obvious. The scantiness of moisture prevents the sap from being distributed in sufficient quantities to the different parts of the tree. A person who has been fed abundantly and has grown fat under a certain regimen, will languish if deprived of his usual food or of the usual quantity, whereas one who has lived sparingly always, although not of so vigorous a constitution, will not materially suffer if deprived of his usual portion of aliment.

When the fly begins its ravages on the musk-melon vines and cucumbers, nothing will so immediately prevent his destroying them as to cover the *stalks* above the roots with rich mould; I make quite a little hill over mine. I find that the fly gnaws this part of the vine first, and the vine soon dies.

How shall we prevent the insect from stinging the plums, apricots and nectarines at night—can any one devise a plan for their destruction· They disappear in the day time.

RURAL ECONOMY.

CIDER.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,—I send you for publication, clear and simple directions for making cider, that those may be without excuse, who make it, as many do, not fit for man nor beast to drink. The apples are beginning to *turn*, as we call it, and I observe that my neighbour, who is a peacable Quaker, that never speaks ill or does ill to any one, and who always takes time by the forelock instead of the tail, is overhauling his casks and righting up his cider-mill, and getting his work ahead, that he may have time for preparing a good stock of cider for the winter. He maintains, that every farmer should make it a matter of conscience to keep a good orchard, and to make cider and home-made beer enough to banish all artificial drinks from his table, besides leaving apples enough for table in winter and a good cold apple pie on Sabbath day. He has been preaching for several years to his neighbours Jemmy Likeit and Tommy Strikeit, that they ought to give up, altogether, the use of "burning liquors," as he calls them, in their houses, and substitute therefor, either good sound cider, or wholesome beer made in their own families, according to some one of the many simple, cheap and infallible recipes to be found in the American Farmer; and though no "lady's man," in the usual acceptation of that term, I have heard him exclaim with more than usual vehemence: "Besides many other considerations, there is one that ought to be conclusive with every man of *gallantry*—by storing thy cellar with fermented, instead of distilled liquors, an innocent, acceptable and refreshing beverage is furnished in warm weather for *wife and children*—the charms and the props of existence!"

He has caused the directions for cider-making which I now send you, to be copied by his little daughter, and given to his neighbours many years since. But, sir, you will hardly believe me, that "burning liquors," whiskey or brandy, is almost the only drink to be found in a country gentleman's house, except—bad water, which is kept chiefly for the women and children, the cats and the dogs. How lamentable, that with the march of the mind, and especially the American mind in the progress of improvement of every kind, this degrading practice has not fallen into universal contempt and disuse! Who can reflect, without regret, on its degrading tendency. We cannot meet together, be the occasion gay or solemn, that whiskey is not introduced. The excuses for the use of it are as contradictory as they are various. Is the weather *hot*, then it rectifies the water and prevents the cramp cholic—in winter, a good drink of grog "keeps out the cold." Even the sincerity of welcome from one neighbour to another. is measured by the frequency that he invites him to pour hot ardent liquor into his bowels—and the man who does not keep it always on his sideboard, is esteemed a morose miserly fellow.

To give you a better notion of the habits of the country, (and I understand you town-folks are not a whit behind us,) I will give you the literal transcript of a dialogue that passed yesterday between two good honest Planters, who can muster 17 children between them, and have hard scuffling to make both ends meet. The visit was paid by Jemmy Likeit to Tommy Strikeit. They live near enough to hear each other's dogs bark and ganders squall, of a clear, frosty moon-light night. It was about three-quarters past ten, when Jemmy rode up and hitched his grey mare over one of the straggling garden pales which remained of the many that had been pulled off by other horses pulling back.

Good morning! Neighbour Likeit—Come, walk in and take a seat; mind, that old chair s a little crazy—its wanted mending these several years.—Well, how d'ye do; how are all at home?

Likeit—Pretty well, I thank ye, Neighbour Strikeit, how are all with you?

Strikeit—Reasonable well, I thank ye, except Polly; she's poorly—and our son Dick, he has a little touch o' the dysentery.

Likeit—Ah! its getting right common about;—this hot weather and eating green fruit, I suppose, brings it on.

Strikeit—Rachel, my daughter, go and tell little John to call Nell to mind the chicken coops and keep off the hogs, while he takes the pail and goes to the cool spring and brings some water; tell him be sure not to let the geese get into the spring, and take care not to muddy it;—been talking I don't know how long about having it cleaned out—every hard rain fills it up with mud.

Likeit—Our water's very bad, too; not fit to drink by itself. The old gum's got rotten, and the spring is so far from the house that the water gets warm before it gets to the house—'bliged to take a little spirit with it.

Strikeit—Ours was pretty good after it was cleaned out last summer, but the old pail has been in use so long, I think it gives the water a kind of woody taste like, without you take a little whiskey with it. I have heard 'em say water drinks better out of a stone pitcher.

Likeit—Yes; I've often thought next time I sent my tobacco to Baltimore, I'd write up and get a stone pitcher—but some how one has so much call for money!—the women folks send so many little orders for pins and needles, and shoes, and such like superfluities—ah! my friend, there's no end to the women's extravagance in these times.

Strikeit—Wonder what o clock it is; reckon its nearly twelve. Rachel, my dear, go and set us out some whiskey, look at the sun on the sill of the front door, and tell Nell to call little John from the spring, and let s have some cool water.

Likeit—How's your corn, neighbour Strikeit, this hot weather.

Strikeit—Come, my friend, lets take a little grog, one may borrow half an hour this hot weather.

Likeit—Pours the tumbler about one third full of whiskey, fills up and drinks about half; neighbour Strike it, your whiskey's very strong, fills up again, my service to you, and turns it off.

Strikeit—Yes, its pretty fair; takes the tumbler and putting in nearly one half full of whiskey, holds it up, looks at it and pours a *little* back for appearance sake, and filling it up with water turns it off.

Likeit—Had you any rain last Friday, there was a heavy cloud seemed to wear round this way.

Strikeit—No, my friend, it passed over neighbour Bowie s corn field and so down the Mattoponi branch, but there was not as much on my tobacco as would wet a silk handkerchief.

Likeit—Ah, so it is neighbour, it seems as though the rich were always in the way o' luck—I don't know how it is, but rains this year seem to be mighty partial.

Strikeit—Ah that they are my friend, come help yourself to some whiskey and water, they say it rains on the unrighteous as well as the righteous, and egad I begin to think more too—Providence like the world we live in, is apt to "*grease the fat sow*"—come take another drink.

Likeit—Well, I dont care if I do, this is very good whiskey; did you get this in Baltimore; drinks again.

Strikeit—Yes, got it of Laurenson, I buy all my groceries of Laurenson, but d——n me, I think the fellow charges rather extravagant, made me pay him 60 cents for this whiskey.

Thus these honest neighbours proceeded to talk and drink, and drink and talk. In the mean time the wife paraded an excellent dinner, and took her station at the table with Grace and Patience, for her handmaids, but neither could procure a drop of pleasant beverage for *her* refreshment. Its true, Mr. Strikeit, as he praised the ham and quaffed his grog, did once give her a nod of the head "my dear your health," but not a drop of any thing had she in which to return his kind wishes except the water which never was known in the hottest weather to kill by its *coldness*. From him to her, it was

"Drink to me only with thine eye,
"And I will pledge with" *whiskey*.

About sunset the last bottle was drained, and Mr. Likeit got suddenly quite impatient for his horse, to go and take orders for the next day's work—Mr. Strikeit ordered his wife to make Tom take the old black horse and the little black jug, with orders to go to Mr. C's store and get a jug of whiskey until he could get another supply from Baltimore, and tell him to call at the Post Office and get my American Farmer, and tell the post master I'll pay him my postage bill as soon as I can sell my wheat. Lets see what Skinner says about the prices of things; these country merchants there's no depending on them now a days, and my dear, tell Tom to balance the jug with the big stone in tother end of the saddle bags, but be sure he dont let the stone fall against the jug, when he takes them off, and break the jug and lose all the whiskey, as he did once before, and my dear tell him to call as he comes back at Mr. Thrifty's, and tell him I want to borrow his wheat fan, and his cart and steers to bring it in, and tell him to call at neighbour Softly's and borrow his new spade and a drawing knife, and then you can make him call at Mrs. Allnut's and borrow the hackle, to hackle that flax, and the little wheel to spin it on, and tell him to be sure to make haste back, as I want the horse to ride to the Tanyard spring in the evening; there's to be a meeting of the Officers of the Regiment, and the Colonel's going to "*treat*" and my dear, while I'm gone, you'll have that bacon taken down and rubbed with hickory ashes, and have that square of greens wed out, and some corn shelled, ready to go to mill Monday morning; but my dear don't take any o' the hands off from their work; you can take old Nell and old Will and little Jim, and my dear, if I should stay late, you needn't be uneasy, as the Col. treats, may be there'll be some speaking. And Polly, my dear, you may send that bridle to the sadlers and get new reins, and that new girth for your old saddle that you've been plagueing me about so long, and you'll see that Tom gets a good corn cob stopper for the jug.

But I forgot that besides this, which is all as true as preaching, you will have to publish the directions for making cider. If you publish this, perhaps some rainy day, I'll give you another picture of real life in the country.

Directions for making sweet, clear Cider, that shall retain its fine vinous flavour, and keep good for a long time in casks, like wine.

It is of importance in making cider, that the mill, the press, and all the materials be sweet and clean, and the straw clear from must. To make good cider, fruit should be ripe, (but not rotten) and when the apples are ground, if the juice is left in the pummice twenty-four hours, the cider will be richer, softer, and higher coloured; if fruit is all of the same kind, it is generally thought that the cider will be better; as the fermentation will certainly be more regular, which is of importance. The gathering and grinding of the apples, the pressing out of the juice, is a mere manual labour, performed with very little skill in the operation; but here the great art of making good cider commences; for as soon as the juice is pressed out, nature begins to work a wonderful change in it. The juice of fruit, if left to itself, will undergo three distinct fermentations, all of which change the quality and nature of this fluid. The first is the vinous; the second the acid, which makes it hard and prepares it for vinegar; by the third it becomes putrid. The first fermentation is the only one the juice of apples should undergo, to make good cider. It is this operation that separates, the juice from the filth, and leaves it a clear, sweet, vinous liquor. To preserve it in this state is the grand secret; this is done by fumigating it with sulphur, which checks any farther fermentation, and preserves it in its fine vinous state. It is to be wished that all cider makers would make a trial of this method; it is attended with no expense, and but little trouble, and will have the desired effect.

I would recommend that the juice as it comes from the press, be placed in open headed casks or vats: in this situation it is most likely to undergo a proper fermentation, and the person attending may with correctness ascertain when this fermentation ceases; this is of great importance, and must be particularly attended to. The fermentation is attended with a hissing noise, bubbles rising to the surface and there forming a soft spongy crust over the liquor. When this crust begins to crack, and white froth appears in the cracks level with the surface of the head, the fermentation is about stopping. At this time the liquor is in a fine, genuine, clear state, and must be drawn off immediately into clean casks: and this is the time to fumigate it with sulphur. To do this, take a strip of canvas or rag, about two inches broad and twelve long; dip this into melted sulphur, and when a few pails of worked cider are put into the cask, set this match on fire and hold it in the cask, till it is consumed, then bung the cask and shake it, that the liquor may incorporate with and retain the fumes; after this fill the cask and bung it up. The cider should be racked off again the latter part of February or first of March; and if not as clear as you wish it, put in isinglass to fine it, and stir it well; then put the cask in a cool place, where it will not be disturbed, for the fining to settle. Cider prepared in this manner will keep sweet for years.

It is certainly of great importance to the people of America to cultivate the fruit that is natural to the soil of their country, and to make the most of the fruit which the soil produces; especially, when its produce is an article of value and of great consumption in this country. A lover of good Cider.

BORING FOR WATER.

Answer to Inquiries in the American Farmer, from North Carolina about implements for boring.

A correspondent on whom we can rely, informs us that any length of boring poles can be made in N. Brunswick, N. J. for 12½ cents per lb. this includes workmanship, such as male and female screws, chisels, &c. The iron poles have been made here that were used in the neighbourhood, and a set has gone to Alexandria for the use of the corporation there, who are boring for fresh water. Some time since, for iron pipes for conveying water, the price was from 37½ to 50 cents a foot, according to the calibre. We now hear that the price of such iron pipes is from 80 to 125 cents a foot. Mr. Disbrow is boring through alluvial, and is lowering iron pipes, through which he means to bore as the soil closes in upon the iron rods. An expert borer, Mr. Buffington, one who has been long in the practice of boring for salt water, says that he connects his rods by means of *male* and *female screws* and that he never meets with accidents, although he has bored in many places 4 and 500 feet deep. Our correspondent who has seen the operation of those with male and female screws, and those connected by means of socket and head with side plates to fasten them, gives the preference to the former, as being more simple and less liable to accidents; but Mr. Disbrow, who considers himself as the inventor of the head and socket and side plates, for connecting the rods, thinks otherwise. The screws are for the benefit of any one that choose to use them. The rods are best of the length of 14 feet. A square frame of the height of from 18 to 20 feet—10 feet at the base and 4 feet at the top, is necessary to be placed over the spot that is to be bored. Across the top is fastened a stout pier of timber, into which a strong pulley is inserted, a rope of sufficient thickness passes over the pulley, one end of which is fastened to the oblong ring or handle of a rod and the other is laid on and screwed to a spring pole, which spring pole is acted upon by means of a large wheel turned by two men; this operation raises the rod about a foot, and as the clamp at the axle of the wheel only touches the spring pole, once at every revolution, the iron rods after being raised a foot is released and drops; this is the whole operation, one man sits by the rods and turns them with both hands after the manner of churning, this makes the hole round. After working at it a day or two it can easily be discovered whether any thing be out of order, after boring about two feet, the rods should be raised, and a copper tube, with a valve at the lower end, should be let down; with this tube, called by common workmen, a thief, the mud that is made by boring is drawn up. But it is useless, says our correspondent, to particularize any further, nor indeed as much, for those gentlemen of Elizabeth City, had better send for old Mr. Bullington, and get him to bore for them. He is now in Chester county, Pennsylvania. A Mr. Joseph Garrett, living in that county, can, we are informed, tell where he is, if he have left that place. We mention him in preference to Mr. Disbrow, because the latter has more work engaged than he can attend to.

ECONOMY IN FUEL.

While economy is the order of the day, it may not be amiss to point out an item of which it is believed a general ignorance prevails. It is well known to philosophers that when water commences to boil in the open air no additional fire can make it any hotter. A contrary opinion prevails, and those employed in cooking victuals, in order to accelerate the operation think that they cannot make the fire too intense. The fuel added for this purpose is, in fact, not only a wanton waste, but by causing a violent ebulition, it forces from the victuals, with the steam its finest flavour. How much fuel in families might be saved if, in cooking, no more were used than to keep the water that is used just at the boiling point, and it is certain the victuals would be the better for it.

MISCELLANEOUS.

Military Academy at West Point.

In presenting some views of this national school, for the information and amusement of the readers of the American Farmer, we adverted to the parting monition and good wishes expressed by the Secretary of War to the Officers and Cadets, as amongst the interesting and affecting incidents that occurred. We now give the substance, and as nearly as may be, the words of his valedictory:

Address, delivered by Mr. Barbour, Secretary of War, to the Officers and Cadets of the Military Academy, at his taking leave of them on the 11th of June, 1825—and of which a copy was furnished to the Cadets on the application of a committee appointed for the purpose.

Cadets,

Being about to separate from you, it was my wish to have taken of you, individually, an affectionate farewell: that being inconvenient, I requested that you might be assembled. I will avail myself of the opportunity this occasion presents to give utterance to the feelings my visit here has inspired. It is with the highest pleasure that I declare, in the presence of this assembly, that my satisfaction has been unmixed. I had prepared myself to see much that would be gratifying, but I can in sober truth declare, that the reality has exceeded my expectations. I have felt only one regret, and that is the necessity, from the paramount claims on my time, to depart before witnessing the examination of *all* the classes. But from what I have seen, I am quite sure that the examination of every day would have added to my satisfaction. *Cadets*, in your deportment and attainments, I see with unspeakable delight, the most satisfactory evidence of your industry, talents, and moral worth. *Officers of the institution*,—in the fine fruits which the examination has presented, I am satisfied with the zeal and fidelity with which you have discharged your solemn trusts. Where all have done their duty, it were invidious to discriminate, and I shall not attempt it; yet I must say, *Cadets*, that Col. Thayer, your chief superintendent, is entitled to your gratitude, and I will add, to the thanks of his country. Children, for so I esteem you since circumstances have placed you under my peculiar care, I feel for you as a parent, and I value it as one of the most fortunate incidents of my life that we have been associated in this intimate relation. Be assured I take a deep interest in whatever concerns you, and that as far as my power reaches it will be exercised for your welfare.

I wish to impress, on both officers and cadets, that the nation is looking to this institution with an eye of hope, and pride, and affectionate solicitude. *Officers*, you will appreciate the honour you have received from your country in being called to preside over the institution as the highest mark of her confidence. The trust which you have undertaken is high and solemn. Behold the favoured children of the nation—these are to be the future men of America. If properly reared, her ornaments in peace—in war, her shield and buckler. To the improvement of the mind, add sentiments of morality, honour and patriotism. The maintenance of your authority by a rigid discipline is essential alike to the youths and to the institution. But remember, they are taken young and inexperienced from their paternal roof; their homes and their parents are afar off; their wants are no longer administered to by the hands of affection—you are substituted for the absent parent. Temper then the sternness of authority by acts of kindness and beneficence. There is no incompatibility between them, and in their due mixture consists the highest excellence of your calling. Your reward is in the consciousness of having done your duty, in the mass of worth and intelligence you annually return to society, and in the approbation of your country.

Cadets—Your country has large claims upon you: you have been singled out amid thousands of unsuccessful candidates as the objects of her favour. Repay this kindness by your exemplary conduct, and by your attainments in science. Subordination to your superior stands forward as a prominent part of your duty—it is indispensable to your own welfare. Although the duties enjoined may seem to your inexperience unnecessarily severe, remember they have been prescribed by your fathers, whose affection you cannot doubt. They are the result of wisdom enlightened by experience. Respect them therefore for the source from which they emanate. There are two roads which lie before you—the signs of the one are virtue, renown and happiness—of the other, vice, degradation and ruin. Is there any one among you whose spirit is so abased as to hesitate which to elect. The one is full of satisfaction,—a consciousness that you have done your duty, giving joy to your parents, and rejoicing yourself in your course. The other presents no temptation but the temporary indulgence of the grossest appetite, whose reward is infamy and wretchedness. You may yet from inexperience not have sufficiently appreciated how essentially the happiness of your parents and the prosperity of your country is involved in your fate. Suppose—but why need I suppose such a case when we saw it but yesterday—a father present.—Then the whole father sat upon his face, agitated by the conflicting emotions of fear and hope, when his son[*] was called to come down on the arena. The anxious suspense was painful to all, till the son with a master's hand distinctly evolved the intricate mazes of the most abstruse sciences—when the gentle murmur of applause circulated from one to the other, till the father's fears were dissipated, and hope changed into confidence. And when, to fill the measure of his happiness, he was told that the attainments of his son[*] were inferior to his moral worth, the tear of joy escaped from his eye, and the parental benediction involuntarily escaping, settled on the head of his beloved child. You, indeed, might not have the pleasure of your father's presence; but wheresoever he is, however distant, his solicitude for your success is no less intense. He is anxiously awaiting the impartial award of the distinguished men who have been called together to examine you. If you have no father, you have perhaps some widowed mother, who nurtured your infancy, watched your sick bed with a sleepless eye, or gambolled with you in health, whose happiness you carry in your hand, and who, when she nightly prepares her pillow, sends up your name on her supplications to the throne of mercy, with the cry of "My God, my God, protect and prosper my child." And in the distant prospect beyond this, see your country holding the wreath of merit for him who deserves it. Is there one of you so debased as to be insensible to these great considerations? If so, there is that other path which you must travel. With the mark of reproach in your forehead, with the consciousness of demerit, you timidly seek the parental roof to carry disgrace into the bosom of that family, who but yesterday at the mention of your name, thrilled with hope and expectation. But this picture is too dark to pursue. Turning from it with disgust, I supplicate our common father that you may be all exempt from such a doom.

There is one other subject to which I wish to invite your most serious attention. Our country, from its extent and for the purpose of geographical discrimination, is divided into sections—East, West, North and South. To this let the division be confined. Add not to it prejudices and jealousies.—Scowl into contempt every term and every effort to keep them alive. Remember, your fathers fought as Americans—as Americans they conquered—in the same name and as one family they produced the present constitution of your country, the noblest effort of the human mind, and carrying in its fate the last hopes of human liberty—thus by one act repaying to Europe whatsoever we were indebted for the arts and sciences, of which she claims to have been the origin. Remember, that you are destined to occupy a distinguished place in the annals of your country—to whose prosperity or degradation you may greatly contribute; and remember, also, that your own country is not alone concerned. Placed as she is at the head of the republics of this hemisphere, her example has become interesting, not only to them, but to all mankind. It is therefore, you have the earth as your theatre, and the human race as your spectators. If the great problem we are working here of man's capacity for self-government fail, there will be an end of human hopes.

Finally, my children, in whatever situation your destiny may place you, keep forever before your eyes what you owe your country; and in the hour of exigency, should it ever come, to you she will look as the able and fearless champions of her liberty, her happiness and her glory.

I tender you all, officers and cadets, an affectionate farewell.

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[*] A. D. Bache.

SPOTS IN THE SUN—ABUNDANT HARVEST.

To the Editor of the American Farmer:

There is at present a double spot, or rather two spots of considerable size on the disc of the Sun, between its centre and its south limb. They are so large as to have been seen by the eye with only the assistance of a smoked glass, but appear at present to be diminishing. This appearance seems to show that they have existed, though unobserved for some time, and their character tends to confirm the suspicion that they have been much larger than they are at present.

The occurrence of such spots having been particularly remarked in seasons of extraordinary warmth and abundant harvests, some astronomers have been induced to suppose that they have a considerable influence on the temperature of our globe. Dr. Herschell, who has made more researches on this subject than any other, has taken as a standard of the relative value of the harvests in England, the average price of grain for each year, and has thence attempted to demonstrate that during the periods when no spots were observed the price of wheat was higher, and of course the harvests less productive, than in other years when the spots existed. The following is the result of some of his investigations.

From 1650 to 1670, a series of 21 years, in which we have no accounts of any spots being visible, although many persons were observing the heavens, the average price of wheat was *l*2. 10*s.* 5*d.* per quarter. During the following period of 21 years, 1671 to 1691, during which spots were occasionally visible, the average price was *l*2. 4*s.* 4*d.*—the ratio between the two, being a little more than 9 to 8.

From December 1676 to April 1684, Flamsteed, who was then observing, saw no spots in the Sun. The average price of wheat during these 8 years was *l*2. 7*s.* 7*d.* During the 8 years immediately following, 1685 to 1692, it was *l*1. 17*s.* 1*d.*—being a ratio of full 5 to 4.

From 1695 to 1700, no spot could be found. The average price of wheat for these 5 years was *l*3. 3*s.* 3*d.* For the preceding 5 years, 1690 to 1694, it was *l*2. 9*s.* 4*d.* and for the 5 following years, 1700 to 1704, *l*1. 17*s.* 11*d.*—the last price gives the ratio of 5 to 3.

During the period from 1710 to 1713, the Sun's disc was tolerably clear of spots, one only being seen in 1710, none in 1711 and 1712, and again one spot only in 1713. The average price for these 4 years was *l*2. 17*s.* 4*d.* For the preceding 4 years, 1706 to 1709, *l*2. 3*s.* 7*d.* and for the following 4 years, 1714 to 1717, *l*2. 6*s.* 9*d.*—The ratio of these two first prices is nearly as 4 to 3.

Whether this supposed connexion between these apparent blemishes of the Sun and the fertility of the seasons, shall finally be considered as the wild dream of genius or as an established fact, it is impossible now to decide. This much, however, is certain, that the coincidence of these spots with seasons of extraordinary heat and abundant harvests, has been so often remarked, as to induce the suspicion that the one event may depend on or be caused by the other. Nor is it a sufficient reason to deny such a supposition, to adduce that we can give no explanation of the manner in which this effect may be produced. The connexion between the Moon and the tides was perfectly inexplicable before the theory of gravitation shed its light on the subject, and our cautious ancestors denied altogether the narrations of stones having fallen from the atmosphere, because they were unable to give any plausible theory of such a phenomenon. WM. HOWARD.

SPORTING OLIO.

HINTS ON THE USE AND TREATMENT OF DOG AND GUN.

Mr. Skinner,

Sir.—Observing that you have alloted a corner in your paper, to that manly and healthful amusement, Shooting, and being desirous that such sports should take the place of the more effeminate ones, too often resorted to by young men of our cities, I will beg leave to offer a few remarks upon the subject.

I am inclined to believe that many of my fellow sportsmen are of late, adopting a fashionable mode of holding their gun, by placing the left hand immediately under the breech, with the hand resting against the trigger guard, under the impression that they are thus secured from the danger attending the bursting of the barrel. This practice has, if I am not mistaken, been introduced by an English author, and as it was imported many may have adopted it without reflecting upon its utility. In my opinion it destroys two of the great principles of shooting, steadiness and safety.

It will hardly, I think, be contended even by those gentlemen who may have adopted it, that a gun of any weight can be held as steadily in this way as when the left hand is extended to the swell of the stock. I shall consider this admitted, and pass on to the safety of the position. The place at which I now am, gives me an opportunity of witnessing the proof of some thousands of gun barrels, and I am persuaded from observation that few burst towards the centre of the barrel. This is easily accounted for. Should the barrel not be properly welded, it is certain to give way the moment the charge is ignited, and consequently burst at the breech, taking with it stock, lock, hand, &c. Should it on the other hand be made of iron too hard, it is generally capable of resisting the pressure until it nearly reaches the muzzle, where the barrel is so much reduced in weight as not to bear the expansion of the powder. Bursting in either of these cases would not be likely to injure a hand placed at the swell of the stock, so that the danger would be confined to the face, which in all cases must be exposed, where the breech bursts. These remarks are not made with a view merely to condemn a practice because it differs from my own, but they are the result of observation, and I believe I should be safe in asserting that not one per cent of the barrels which burst, separate about the centre, unless from some very palpable defect, which the eye of an experienced sportsman might detect. Most of the accidents which occur, or more properly, most of the fowling pieces which are bursted proceeds from the neglect of sportsmen. If gentlemen would not so often become the owners of cheap guns, which are given to a servant to clean, weeks perhaps after they have been used, we should not I think hear of so many accidents. For even good barrels treated in this way, will not last many years. But as many accidents will happen; it is better to guard against them; I would therefore advise that the gun be held in the old way which I think accords best with common sense. Before I conclude, let me remark that a true sportsman will always attend to two points when he returns from the field 1st. See that his faithful companion, his Dog, is properly provided for; for he has doubtless performed the greatest hardships of the day. 2d. That his gun and tackle is prepared for the field at a moment's warning, and not have to clean the rust off and hunt up flints, &c. &c. &c. while perhaps his friend is impatiently waiting for him, and the day wastes. If you think these hints worth notice, or likely to prevent one single accident, it will more than repay

Your obt. servt. B.

RECIPES.

TO MAKE ITALIAN CHEESE.

A pint of cream, a teacup of white wine, juice of two lemons, a teacup full of isinglass; sweeten it to your taste, mix the ingredients with the cream, put into a cold bason or what other shape you please, and turn it out the next day. The isinglass must be boiled, strained, and put into the other things when cool.

N. B. An ounce of isinglass in two cups of water boiled till it comes to one.

TO PREVENT CHIMNIES FROM TAKING FIRE.

The pargering mortar (so called by masons,) for plastering the inside of chimnies, mixed as it generally is with lime, sand and horse manure, made into mortar; let there be a pickle made of salt and water nearly as strong as that you use with meat, and the mortar wet with it instead of pure water—salt, sand and sea-water, where it can be had, will answer the same end to mix with the lime and horse manure. Chimnies plastered with this composition, on every damp or rain, will grow moist, and the soot will fall off without any inconvenience. This may be relied on, and the expense is so trifling, no one should hesitate to do it, for it can do no harm at all events, and it may save houses and towns.

THE FARMER.

Baltimore, Friday, August 5, 1825.

☞The demand for *complete sets* of this Journal has recently been so steady and frequent, that the Editor deems it his duty, no less than his interest, to give fair notice that there are not now fifty left—and that he shall certainly never print another edition of the early numbers. Those, therefore, who would procure this work, either for themselves, or for societies, or public libraries, have warning to make immediate application. There are six volumes already out, with each an ample index, which may be had for $5 per volume, or $30 the sett.

☞We will answer in the next number more fully to the correspondent, who inquires, without date or place, as to the nature of, and remedies for, a complaint prevailing amongst his cattle, which appears to us to be what is usually denominated, foul-foot, or hoof-ail. In the mean time, let him use the following ointment—hogs' lard and common turpentine, of each four ounces, melted together, and when removed from the fire, stir in, of blue vitriol, *very finely powdered*, one ounce; continue stirring until the ointment is cold.

We observe that at the late sale of Saxony Sheep in Massachusetts, four subscribers to the American Farmer purchased thirty sheep, for which they gave an average price of about $125 each.

Tobacco.—Inspections in the three state warehouses for the last week, 445 hhds.

WHITE FLINT WHEAT.

We have on hand, and propose keeping, a supply of the above article for seed, which is said to resist the Hessian fly, and produce more to the acre than other sorts. The grain is large and white; from our observation on 9 bushels sowing, which we carefully examined through the last season, we most decidedly give it the preference to any kind we have raised. The largest proportion we shall have will be in barrels containing about three and a half bushels, (contents marked on each,) it will be inconvenient to sell less than a barrel. Price $2 per bushel.

On hand—A choice assortment of Ploughs, Wheat Fans, and Implements of husbandry; garden and field Seeds. Orders for any of the above articles will receive immediate and careful attention, and shipped as directed, by SINCLAIR & MOORE,

8th mo. 5. *Pratt-st. wharf—Baltimore.*

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9	9 50		
BACON, and Hams, . .	lb.	7	9	10	
COFFEE, W.I. Green, .	—	17½	18	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	29		
Georgia Upland, . . .	—	22	26		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18	—				
CANDLES, Mould, . .	—	11	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	35	36		
FISH, Herrings, Sus.	bbl.	2 18		2 25	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 62	4 75		
Fine, ...	—	4 12			
Susquehanna, superfi.	—	4 38			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	44	48		
Wheat, White, ...	—	90	95		
do. Red, & Lawler	—	85	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	45	47		
Barley, ...	—	50			
Clover Seed, Red . .	—	3 75		4	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	200			
HOGS' LARD, ...	lb.	8	9		dull
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, Havana, .	gal.	24	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7½	8
NAVAL STORES, Tar,	bbl.	1 62		1 87	
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2 50			
OIL, Whale, common, .	gal.	24	26		
Linseed, ...	—	80			
PORK, Baltimore Mess,	bbl	15	15 50		
do. Prime, . . .	—	11 50			
PLASTER, cargo price,	ton.	4 00	4 25		
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 25	3 75		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	26			
PEACH BRANDY, 4th pr	—		82	1	
APPLE BRANDY, 1st pr	--	40			
SUGARS, Havana White,	c.lb.	13 00	13 50	14	15
do. Brown, . .	—	9 50	10		
Louisiana, ...	—	9	10 20	10	12
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	75			
Ginger, Ground, . . .	—	7	8		
Mace, ...	—	2 50		3 00	
Nutmegs, ...	—	2 00		2 25	
Pepper, ...	—	19		25	
SALT, St. Ubes, ...	bush	40			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	2 70	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

MEMOIR ON THE CULTURE OF COTTON.

Sir, *South Carolina, June 30, 1825.*

I have been a constant reader of your paper, and have derived both improvement and pleasure from its columns. The earnestness with which I have sought for communications headed "cotton culture." has frequently admonished me that, I was as much bound to communicate my experience, as were any of your numerous correspondents. from whose labours I have profited; and who, being less backward, are therefore more deserving: nor will I be longer deterred from such communication because I am conscious I have not reached perfection in the culture of a particular plant. The buoy is some times as important to the mariner. in showing him where he ought not to go, as is the pilot, at another, in directing him where he may. The cultivators of cotton have contributed less than other planters to make your paper valuable. These observations will serve to augment the number of good intents on their part, if nothing more.

The cotton plant. while in the seed-leaf, is very tender, perhaps as much so as any, the most tender, of our garden vegetables; when it has arrived to what we call the cotton leaf, it is probably more hardy than any of them. The product of an acre of rich land is increased, in my opinion, more by the length of time it is allowed to grow, than from any other single circumstance: hence it is advisable to plant as early as the absence of frost will admit; and being in its early stage very tender. too much care and labour, in preparing the ground for the seed, can hardly be given. My method is to plant in drills, on beds made with the plough and hoe, or plough and horse-rake, or harrow, according to the nature and circumstances of the soil. Land that will produce ten bushels of corn to the acre, can yield five hundred pounds of seed cotton. The drills on such land. I make three feet apart: and thin out the cotton, to the width of the hand between the stalks. If the drills were nearer, the product might be somewhat greater, but the use of the plough would be more difficult. From land that has yielded me seventy-five bushels of corn to the acre, I have weighed twenty-three hundred pounds of seed cotton. This was planted at seven feet distance, between the drills. and thinned out to three feet between the stalks these extremes embrace the entire distances of which I have any experience, and by which I am governed. When I have land sufficient for these changes, my course of crops is. cotton, corn, and small grain. My first process is, to run furrows as deep, with a Freeborn No 1½ plough. as two mules can draw it, at the distance from each other that I mean to have my cotton rows. Into these furrows I draw, with the weeding hoe, (we call it "listing,") all the stubble and vegetable matter between the rows, having sprinkled plaister on it, I break up the "balks." intervals between the rows, as deep as possible, with the same description of plough. When this is done in old land, or land pretty clear of stumps, I prepare and finish these beds, thus thrown together with the plough, generally, with the horse rake, by running them on the beds backward and forward, until the surface be pulverized sufficiently to receive the seed. When in new ground, abounding in stumps. the clods are broken, and the surface prepared, with the weeding hoe. If the land be very stiff and cloddy, I prepare the beds with harrows, instead of the horse-rake. My harrows are made in two parts, attached together by hooks and hinges, and when put together. form an angle less than a right angle triangle: when at work, the joints or hinges, being over the middle of the beds, admit the teeth to touch and work the whole surface, sides as well as tops of the beds at once. When the beds be too dry and hard, I find it advantageous to secure on each leaf of the harrow, a block of wood, more or less heavy, according to the nature and state of the ground: these are worked easily by two mules. My horse rakes are made with a piece of timber two feet and a half long. five inches thick and twelve inches wide, worked off at the two ends, and hollowed out in the middle, so as to be in a semicircular form. five inches by six inches when finished; into the hollow edge two rows of iron teeth. half an inch thick. three quarters wide. to show five inches. are inserted; the front row placed opposite the intervals of the back row; the rows three inches apart. and teeth four inches in the rows from each other; on the top of the semicircular piece, fasten two pieces of oak four feet long, three by two inches in size, resembling somewhat the hind hounds of a wagon. with a nose-iron, where the two forward ends are joined together, for the swingle tree; above these attach two handles, like a common plough. This horse-rake I have found very advantageous, not only in preparing the beds for the seed, but also in covering them when dropped in the drills. When the ground is in proper order for work, they finish the beds in a beautiful and most regular manner. The seed may be covered with them better than in any other way; and as they expedite the work very much, it rarely happens that I may not wait for the ground to be in the best possible state for covering. A man and one mule may prepare with it from six to ten acres a day, and can cover as much, according to the state of the ground and the width of the rows. The beds being thus made. and the season for planting at hand, I proceed to open the drills; this I do with a drill plough. It is made, by fastening to the bottom of a piece of two inch plank, ten inches wide, two feet and a half long, square at the hind end and pointed at the front one, a piece of oak, by way of keel, of the same length, one inch thick at the bottom edge and three at the upper The bottom edge is armed with an iron plate half an inch thick, so pointed and squared at the front end, as to enter the socket of a coulter of the common form, the upper end of which is wedged securely in the beam—the upper fixtures are like those of a plough secured to the plank by a helve; the keel ought not to be more than two inches deep. This plough is very light, and is worked by one mule. walking on the top of the beds, and can open as many drills in a day as a horse-rake can cover.

For several years last past. I have omitted to cover the seed at the time of dropping it In stiff land, the advantage results from lessening the chances of the soil being "caked" over it by hard rains, through which the cotton cannot penetrate, and which must be raked in some way. or replanted. In light soils, the rains which fall after the seed is dropped, will cover them sufficiently—but if this does not happen, by having a proper number of horse-rakes, each being capable of covering ten acres in the day, the whole crop may be covered in two days, and of course commenced at the very moment when the ground is in the best possible state for the operation. By this mode of covering, the whole surface of the bed is stirred and dressed nicely, *later* after the seed is dropped. and in a more expeditious manner than any other I have seen tried.

Having planted my cotton, which I ought, perhaps, to have said. I invariably begin on the last of March. or first day of April. I begin the culture of it, as soon as the progress of other business will admit, whether it has got up or not. The first operation is to hoe it. This is done for the first time, by shaving down the beds, as near to the plant. and as light as possible; if there be weeds or grass too near the plant to be removed by the hoe, they must be picked out with the fingers: this is indispensable, to save time and labour afterwards. Immediately after the cotton is hoed, i. e., a sufficient quantity to admit the ploughs; not waiting to complete the first hoeing, I commence the first ploughing: this is done by running one furrow as close to the cotton and as shallow as possible, on each side of the rows, throwing the furrow-slice from the cotton. All the corn I have not hoed previous to the hoeing of cotton, (I prefer there should be none,) I now hoe; and then commence the second hoeing of the cotton. This is done by chopping through the rows of cotton, either with the corner of the hoe, or to its full width, if the soil be rich, leaving the cotton in bunches of four stalks between the chops. stirring the beds on both sides. and filling up the chops with fine soil drawn up from the sides of the beds. Now follows the second ploughing: reverse the furrow slice of the first ploughing, by throwing it towards the cotton, by one furrow on each side of the rows. the mould-board next to the cotton of course; the balks, or "middles," are then to be flushed up, either with shovel, skimmer. or double iron mould-board ploughs, according to the state of the weather; if it be dry. I prefer the two first—if wet, the last is best. Thus I proceed. alternately hoeing, always drawing up the soil after the first hoeing and ploughing; always with the mould board to the cotton after the first ploughing, until the limbs have grown so much as to prevent both hoe and plough from passing between them, without breaking them off. This happens generally by the 1st of August, by which time I have usually hoed the cotton eight or nine times. I find it necessary to hoe such a portion of the corn, at the end of each hoeing of the cotton, as will give to it a sufficient quantity of work to keep it clean. I also endeavour to have each series of ploughing began at a little distance farther from both cotton and corn, than that which preceded it; thus cutting the principal roots of both, at each ploughing, farther from the stalk than it was cut before. By this process, I believe, the small fibres are increased, and additional mouths opened, through which the plants draw their nourishment.

I conclude, from examination of the roots, that they grow into small knots when cut. and issue from these, and from between these and the stalks, small fibres. other than would issue. if they were not cut; of course they ought not to be cut *back*, or a second time nearer to the stalk than they were previously. The last operation in the cultivation of cotton with the plough, should be to run a furrow with a bull tongue, or with a coulter plough, in the middle between the rows, and as deep as may be: these ploughs being very narrow. may be passed between the rows, without injury. later than any other. Except this furrow. I endeavour to cultivate as shallow as possible.

Cotton should be thinned after the first hoeing. At the second hoeing, I chop through the drills, leaving it in bunches; at the third hoeing, I reduce these bunches to two, or even to one stalk, if the plant be forward or the hoeing backward and the weather favourable; afterwards the thinning should be continued so as to prevent it from being crowded: according to the richness of the soil. I leave it more or less distant in the drills; of this each planter must necessarily judge, and concerning which many differ.

In my opinion, the aggregate product of a field of cotton is very little affected in quantity by thinning; particularly if it be rich soil; but the quality of the staple. which is of as much importance as the quantity, certainly is very materially. My experiments on this part of the business have satisfied me this opinion is correct.

As early as the first of August, I top the cotton. This is done by pinching off the bud I sometimes extend this to the limbs also; when the plant is large and flourishing. and the pods backward, I think it may be done advantageously. If the season be moist, the plants luxuriant in growth, appearing, full of sap, suckering is very proper; but if these indications have subsided, by the plant appearing more woody, and the leaves have become small, or are decreasing fast, suckering is unnecessary, or may be omitted without much loss. I do not doubt that topping and suckering tend to increase the quantity of the crop some, and the quality much, and therefore should be done as extensively as circumstances will admit; the last, however, is so tedious, and our crops are now so large, but a very small portion of them can be thus treated.

When I have open land sufficient, I have found it advantageous to follow the cotton crop with one of corn, and this last with small grain; taking care to plough the corn, the two or three last times, the way I mean to have my cotton rows when the field is next planted with cotton—thus avoiding the tedious operation of "laying off" the rows. Corn grows kindly after cotton, and with less labour.—Cotton succeeds to small grain advantageously, because of the quantity of vegetable matter left for "listing" into the deep furrows intended to be the base of the cotton beds, and which, with the use of plaister, amply repays both labour and cost.

I will add a little on the subject of manure. We frequently hear much surprise expressed at the quantity of manure that is used by particular individuals; indeed there are but a very few, if any planters, who have not at some time or other, complained of the scarcity and the difficulty of procuring it. Later experience and more attention induce me to say, there is nothing in the southern country more abundant; at least the materials with which to make it: nor can we be ever in want of them, until black-jack leaves and pine straw become scarce; a circumstance which every traveller, passing through our state, will be apt to place at a very remote period indeed. In truth every man who shall use the means within his power, will find the supply limited only by his ability to collect and apply it Generally, when we have carried into the field the droppings of our cattle in our cow-pens, and of our horses in the stable, we laud ourselves for the improvement we have made in good husbandry; and in fact this is gaining much, for since my recollection, neither was thought of—the first having served only to make a turnip-patch, and the last remained a constant annoyance throughout the year. Now, from these alone, we may elaborate as much good manure as we can haul into the fields in season for planting. In making this kind of manure, it is only necessary to be *willing* to collect from the woods, leaves of any kind, pine straw as good as the best, and place them in our cow-pens and stables, to find the quantity of excellent manure increasing beyond our expectations. If top soil of any kind be scattered among them, so much the better. This may be had from the corners of the fences, the sides of the roads, ponds occasionally dry, and such parts of the plantation as from situation will never be cultivated. There are but a very few planters to whom any one of these sources of supply would not be abundant; no one can exhaust all of them that are convenient to him. I might add weeds: can any one apprehend a scarcity of these? and pond grass, which last, with plaister, I have found admirable for sweet potatoes, on very poor land. Should care be taken to carry into fields of light sandy soil, that which has been collected where clay abounded, and *vice versa,* so much the better: with, or without such care, he who will try it, will find his time and labour repaid with usurious interest.

It is not for planters to complain of the want of manure, until they have proved how excellent are even the carcases of their dead beasts, the very bones of which are valuable. Instead of letting them rot on the surface, alike disgraceful to our care and dangerous to our health, if we will not make the best use of them, by compounding them with six times their bulk of top soil—at least bury them in the field, where they will distinguish the place by superior fertility for many years.

If any man, living in a poor sandy soil, will fill a single furrow across one of the plats in his garden, with black-jack leaves, taken from the woods, even in a windy day of March—bed on them, and plant a row of peas, he will require no farther encouragement to make a larger experiment: fortunately, every additional act to increase their fertility, by littering with them, or by mixing them with dung, will be rewarded with additional returns.

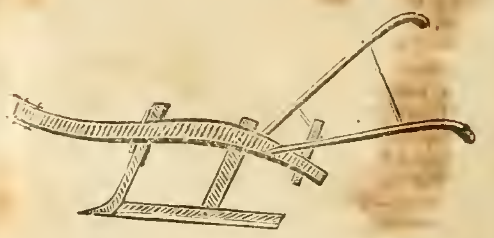
By a process analagous to the above, I make, every year, an excellent compost, by substituting cotton seed for animal dung. Beds, rather mounds, formed with alternate layers of cotton seed, top soil and leaves of every kind, or pine straw, in the fields, immediately while the ginning of the cotton is going on, in such number and places as the size of the field may require; the whole covered up with the soil nearest to the mound, and patted close with the spade—I have found, on opening these in the spring, to be used for cotton or corn, very rich manure. This mode of using the cotton seed, is economical of labour; advantageous, by distributing it throughout the field, to be manured at a period most suitable and convenient; and very abundant in quantity. I think one wagon load of cotton seed thus disposed of, is as valuable as ten in the usual way. The entire evaporation of the oily and other matter of the seed, is prevented from escaping during the process of fermentation, and arrested and retained by the top soil and leaves. I have used each of these component parts of the compost separately: and so completely was the fertilizing quality distributed, I could discover no difference in their effects. While the mounds are kept well covered, and properly patted with the spade, so entirely is the evaporation prevented, there is no smell perceived near them: every cotton planter knows how offensive a large bulk of rotting cotton seed becomes, exposed to the sun and rain.

Additional supplies of manure are to be had from feeding our cattle in pens. Col. Taylor has shown, in his Arator, how much may be done in this way with dry corn stalks alone. I have derived as much benefit from keeping my cattle out of my fields, by his system of feeding them in pens, as from the large quantities of manure made in them. But these processes require labour to collect the materials, and labour to distribute the manure; and that which is still more difficult to regulate, *time* also.—When I have done all that my labour and time will admit of in these ways, to complete the course of manuring, I sow such parts of my lands; each year, in oats, that I have not been able to manure otherwise. From these, I collect only seed enough for the ensuing year, and plough in the rest, having first plaistered it. The seed is gathered by stripping it with the hands, from the stems, standing in the field. I think this is the easiest and most expeditious method of saving oat seed that I have seen tried. The oat straw is best turned under by attaching a skim-coulter, or iron bolt, to the beam of the plough, with the outer end turned down; this should project from the beam horizontally, a little forward of and beyond the mould board. Oats sown for manure, or indeed for any other purpose, need no other labour than simply sowing; this being done in the cotton field immediately before the hands begin to pick cotton; or in the corn field before it is gathered, will come up very well. It is only necessary to sow them before either operation is commenced, to have them rise well.

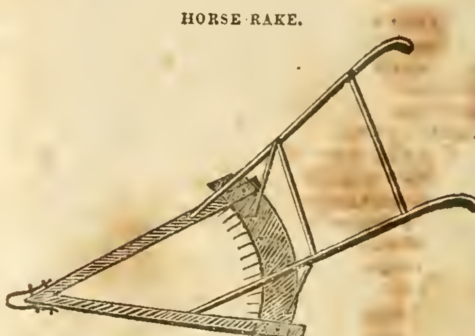
It was my intention to say something of my manner of applying manure. I have, however, already said more than I had intended. For the encouragement of those who are willing to make some additional efforts, allow me to add, by the means above hinted at, I have converted considerable portions of my fields, which were literally exhausted, into as productive soil as any I now cultivate—and this has been accomplished since 1808, by

A Cotton Planter.

DRILL PLOUGH.



HORSE RAKE.



AGRICULTURAL REMARKS,

Made by Robert Sinclair, of Baltimore, on a tour through part of Maryland, Peansylvania and New York—addressed to the Editor of the American Farmer.

Having for some years been closely and arduously engaged in my Agricultural Repository, and finding my health requiring relaxation, and apprehending I might improve it by travelling through some of the most healthy and best cultivated districts of our country; calling in my way on some of the scientific and enterprising agriculturists and horticulturists (with some of whom I had business.) to discover whether any improvements are making either in cultivation, implements, seeds, or plants; and thereby rendering my journey amusing and useful; I sat out on the 6th month, 6th, (June,) 1825, for Little York, Pennsylvania.

On the turnpike road, between the 8th and 18th mile stone, my attention was struck with the fertility and improved state of this fine district of limestone country, far and widely extended, and every where loaded (at this beautiful season of the year,) with grain, grass, and, in many places, good buildings, bearing strong marks of plenty and comfort, and being so contiguous to the Baltimore market, where is found a certain and ready sale for all the various productions, as also the immense quantity of lime that city uses and vends.

The advantage of this rich district of country to Baltimore, is, and will be very great. The contrast between the gravelly, unimproved land, on our Eastern and Southern post roads, and the above district, is very striking: the latter is well calculated to give travellers a more correct idea of the quality of the land of the state. After travelling twenty-eight miles farther, through a thin though improving country, from an eminence I saw, at two miles distant, the beautiful town of York, situated in a rich limestone valley, of considerable extent; covered with waving fields of grain and grass, through which the noble river Codorus meanders, on the bosom of which the citizens of York soon propose launching an iron steam boat, of small size, to navigate the upper waters of the Susquehanna.

The country, generally, in this neighbourhood, is in a high state of cultivation; abounding with wheat, rye, corn, oats, and grass. There not being much wood to interrupt the view, about four-fifths of the land in the above crops, and all of a beautiful green, was a sight truly interesting to a citizen having a relish for rural scenes. I was informed that there were about twenty acres in vineyards, in the neighbourhood of that place. I saw Michael Eichelberger's, containing six acres, about two of which is in full bearing, and planted in a slate loam about four feet apart each way; which I thought too close, as they had to dress them with hoes and spades, instead of the plough, which would lessen the expense of culture—an important consideration in this country, where labour is high and land cheap. They might be so cultivated, if they were planted 4 by 8 or 10 feet apart. From appearances and some experience, I have no doubt but very good grapes and wine may be raised in this country, if as regularly attended to as a field of corn. From York, I travelled towards Philadelphia by way of Columbia and Lancaster. The former is a handsome village situated on the Susquehanna river, and affords a considerable market for lumber, &c., brought down the river, which stops there on the way to Baltimore; much of which is sold to the wealthy farmers and neighbouring villagers in this rich country. Lancaster is about twelve miles distant, near the river Conestoga, and is said by some to be the largest inland town in the Union, and the land on the river, and in this limestone valley generally, is, I think, the richest, and in the best cultivation, (as grain farms,) I have seen. Though their buildings are commodious and many very neat, yet in some instances there is a want of neatness about and near them, so necessary to the comfort and pleasure of families, and which a traveller expects to see where there is so much wealth. The land being rich, they crop hard, as will appear by the following rotation, which they frequently adopt: 1st, corn; 2d, barley or oats; 3d, wheat, with manure; 4th rye; 5th, clover and timothy. When they are not likely to have manure for the barley or oat stubble, they omit the barley or oat crop, and break the corn ground for wheat before harvest. Then the rotation is corn, wheat, rye, and grass seed. On the above system, not more than one-fifth of grass land is broken annually, and as they keep few cattle, and these mostly soiled in the stable until after harvest, nearly four-fifths of the whole cleared part of the country is left in harvestable crops; which, at this season, adds very much to the beauty of the surrounding scene. In the great valley, and near the city of Philadelphia, in many places, I observed they sowed the orchard-grass seed instead of timothy. The implements used in this part of the country are as follows: a large three-horse plough for breaking up their grass ground, with which they plough about seven inches deep; after being well harrowed and slightly marked both ways three and a half feet apart; the corn is then dropped and covered at those intersections, and thinned to the stalks in a hill; is then once harrowed and dressed with hoes or rakes; after which the corn ground is kept clean and mellow by the five-tined cultivator, run through it twice in a row, and repeated as occasion requires, leaving the ground level and mellow, ready to receive and retain the moisture. The surface not being much reversed by the cultivator, is one advantage over ploughing in dry weather, as it does not bring the moist soil to the top to be dried. Also, in a distance of sixty miles I saw no person ploughing the corn; as they say it brings the sods to the top, which they wish kept at the bottom, as the best nourishment the corn roots can have, and to have the sod rotted before ploughing for the wheat crop, which is at times to succeed the corn. The cultivator is in general use in this and other parts of the country; is strong and valuable, and costs only from five to six dollars. The horse hay-rake is in very general use in most of the eastern counties of Pennsylvania and in New Jersey, with which they can rake as much hay, and glean the grain stubbles as fast as seven men can do with the hand rake—which is a saving in both time and crop. The American grain and grass scythes, spring-steel hay and manure forks, are also in general use. I observed, in many parts of Chester and Delaware counties, the farmers followed grazing either for beef or butter. They manure and lime their land highly, until it is sufficiently strong to produce a good crop of smooth stalk meadow-grass, green grass, (*Poa pratensis,*) and white clover, with which the land is soon covered. As the red clover fails with which the land is laid down after mellowing crops, this sward of white clover and green grass they carefully preserve, without ploughing, for many years; and in order to prevent its running out or becoming hide-bound, as the graziers term it, they sometimes scarify the sod and manure on the surface in the winter. But if they are obliged to renew the grass by ploughing, they give the land a good coat of manure and plough it about four or five inches deep, and turn the sward very neatly; immediately sow it down with wheat, which never fails to produce a good crop; the native grass comes up through the seams, and is much more vigorous. But the graziers plough as little as possible, esteeming a good crop of grass more profitable than grain; when the cost of cultivating grain crops is counted; and when land is got into this state, it frequently rents for eight dollars per acre. By adopting a regular system of grazing, few hands are required; the land always looks handsomely, while it makes the owner and the land rich together. The grazier calculates that one acre of good rich native grass will make a thrifty steer fat in four or five months, which adds to his value one half;—say he costs twenty dollars, when fat is worth forty—making an income of twenty dollars per acre.

One hundred acres at $20, is		$2000
Deduct rent for land	$800	
Wages for herdsmen	150	
Interest on first cost of cattle	60	
Salt and incidentals,	25	—1035
Profit		$965
The same land, after the cattle are off, will fatten at least three hundred sheep, only estimating the clear profit per head one dollar, is		300
		$1265
This is a handsome income for a tenant; the owner would receive		800
besides having his house, garden and orchard worth to him		200
		$2265

This is a handsome income from about one hundred acres of land, and very little trouble attending it, compared to a grain or tobacco farm.

There is a laudable emulation among the farmers of Pennsylvania in building good barns, which accommodates their stock comfortably. In them they stow away their hay and grain; when the wheat is threshed out the straw is replaced, ready to litter the stables and feed cattle. The provender is so convenient, that a boy can feed the stock of a considerable farm in half an hour without going out of doors—and as all the hay and straw is in one place, consequently all the manure, without much attention, centres in one body, and is by that means preserved, as they have mostly a cow-yard with a fountain of water in it; in this the manure is kept, and the cattle run during the day to get water, &c.—Those barns are so constructed that the lower story holds all the stock, and frequently have granaries and carriage-houses, with room for all the hay, wheat, &c., produced on one or two hundred acres. This building is much more convenient, costs less, takes less room, and the business is more easily conducted, than by building corn-house, stable, carriage-house, hay and straw sheds all separate, as some of our farmers do, requiring four times the roof, which is the most costly part of a building, some of which are frequently of a temporary character, and are often a disgrace to a handsome farm; whereas the barn is a convenient, substantial, cheap building, considering the accommodation it affords.

(To be concluded in our next.)

ARTIFICIAL GRASSES, OR GREEN CROPS.

From the Complete Grazier.

(Continued from p. 149, American Farmer.)

In the course of the present work we have stated the various modes of consuming grasses to the most advantage; in the present section, therefore, it is proposed to give a concise notice of the best artificial grasses, or vegetables cultivated and considered in that light, and which are every way worthy of attention.

CLOVERS.

There are four species of clover usually cultivated, each possessing various degrees of value, but all of which are more or less useful in feeding cattle.

1. *White*, or *Dutch Clover*, (*Trifolium repens,*) is by no means a lasting plant on wet or swampy, loamy, or clayey soils; but on dry, sandy, loamy soils, it will thrive with great luxuriance, especially if it be often rolled. This sort is preferred for sheep walks, and when closely fed down is of very great utility; it is usually sown with red clover, ray-grass, or barley, and on dry soil produces most excellent hay.

2. *Red perennial Clover*, or *Cow-grass*, (*T. medium.*) better known by the name of marl grass, continues longer in the land than the common clover, and vegetates spontaneously on marly soils—though it has been cultivated with the happiest success on sandy, loamy, and heavy clayey lands. The time for sowing it is from the middle of April till the second or third week in May. This sort, as well as the common clover, is sometimes sown with flax on very highly-cultivated soils; and as flax is a forward plant, it may in general be removed sufficiently early to allow the clover time for growing. Red perennial clover, however, rarely succeeds when sown by itself, as it will not withstand the severity of winter without some kind of shelter. It produces abundance of seeds, which may be easily collected, and is more frequently employed for laying down land to grass.

3. *Hop-clover*, or *hop-trefoil*, or *black nonsuch*. (*T. procumbens,*) grows naturally in dry meadows and pastures, and flowers in June and July. It has lately been strongly recommended to the attention of agriculturists, by Mr. Amos, inventor of a new and useful drill-plough, for laying down land to grass: when mixed with the preceding species, on light soils, it affords a most excellent fodder.

4. *Common Clover*, (*Trifolium pratense,*) flourishes best on firm soils, and is obtained by sowing seed, in the ratio of ten or fifteen pounds per acre, at various intervals between February and May. It is either sown in conjunction with spring corn, or (which is better on grass farms,) with ray-grass; and, if it be mown when the ray-grass is coming into blossom, the lower growth will be materially increased, and a very considerable quantity of excellent grass be obtained; beside which the clover will be effectually sheltered by the rye-grass from the consequences of severe frosts The best modes of consuming clover having been already stated, we shall only observe, for the convenience of collecting its seed, that the common clover is in flower

from May to September, and that the ripeness of its seeds may be easily ascertained by the stalks and heads changing colour.

5. *Lucerne* (*Medicago sativa*,) is of French growth, but was introduced into British husbandry about the middle of the seventeenth century; it flourishes most luxuriantly in deep, rich, friable loams, though it will also thrive in any good, dry soil, and in the coldest climate; but the soil must be kept as free as possible from weeds, otherwise its luxuriant growth will be greatly impeded. In order, therefore, to clean the land, Mr. Young, sen'r, recommends two successive crops of turnips or carrots, as the most successful preparatory step; but in case a fallow be preferred from convenience, a person ought to follow the ploughs, harrows, or extirpators, and collect all weeds for the purpose of a speedy removal. It will be necessary to give the soil three ploughings, and as many harrowings, in the second spring, before the lucerne is sown, that it may become as fine as possible; manure is not essential to its culture; but if used at all, it should be spread with the first crop of carrots or turnips.

Lucerne may be either broad-cast or drilled, or propagated by transplanting; all of which methods have been successfully practised. The proper season is towards the middle or end of March, or not later than April; because, like the turnip, lucerne is subject to the ravages of the fly, and by early sowing it will attain a sufficient degree of growth, so as not to be affected by the devastations of the insect. If broad-cast, twenty pounds of seed (which should, if possible, be *new*,) will suffice for one acre; if drilled, six pounds will be enough; if the seed be deposited in equidistant rows of two feet. The value of lucerne crops will be greatly increased by sowing with oats, which Mr. Young prefers to any other grain, in the proportion of six pecks of the latter per acre for very rich land; of two bushels for indifferent soils; and of three bushels for poor soils. As soon as the grain is sown and harrowed, the lucerne should be sown, and a light harrow be passed over it, whether drilled or broad-cast.—Where, however, lucerne is sown with the view of being transplanted, the seed should be deposited in the ground early in the spring *alone*, and be carefully hand-hoed till August, when they will be sufficiently large to be transplanted; after which they will require but little attention till the following year, excepting that it will be advisable to hoe the transplanted crops once or twice during the intervening period.

The expense of cultivating lucerne is very considerable, and should not be incurred by the young farmer without much reflection; though the great profit it affords is certainly no mean inducement to attempt its culture. The expense of drilled lucerne, Mr. Young computed (in 1796,) for the first year to be as follows:

Two spring ploughings, extra - -	l. 0	18	0
Harrowing, - - - - - - - - - -	0	2	6
Eight pounds of seed, - - - -	0	8	0
Drilling, - - - - - - - - - - -	0	2	6
Horse-hoeing in autumn, - - - -	0	2	6
Hand-hoeing in do. - - - - - -	0	5	0
First year, - - - - - - - -	l. 1	18	6
ANNUAL.			
Rent, tythe, and rates, - - - -	l. 1	10	0
Four hoeings. - - - - - - - - - -	0	10	2
Three hand hoeings, - - - - - -	0	12	0
Five mowings, - - - - - - - - -	0	12	6
Raking together, - - - - - - -	0	5	0
Loading and carting home, - - -	0	7	6
Manuring, to the annual amount of -	0	12	0
	4	9	2
Clear profit, - - - - - -	9	18	5
	l. 14	7	6

By keeping 5 horses from the beginning of May to the middle of October, at 2s. 6d. per horse, per week, - - - - - - - - - l. 14 7 6

Mr. Young remarks, that the expense of raking, mowing and carting, cannot be easily calculated, unless the quantity cultivated be sufficiently large to furnish employment for a man, boy, and horse; and that, though he has estimated the cost rather high, yet it is perhaps not exaggerated if the loss of time necessarily consequent on inadequate employ be duly considered. He would, therefore, fix the annual expense at 5*l*., as he thinks an acre of land cannot be cultivated for less, even under the most excellent management.*

But, notwithstanding these heavy expenses, lucerne has, upon the fairest trials, been found fully adequate to them; and Mr. Young observes, that if the value of the food be computed according to the maintenance of cattle per week, *it will pay nearly cent per cent.*

The first use of lucerne is for soiling horses, or other cattle, from three to five of which may be supported by the produce of an acre during the six summer months; the lucerne being cut twice a day, and given in a fresh state to the cattle. For fattening bullocks, also, Mr. Young thinks this plant well calculated: the experiments made with this view, indeed, are not numerous, though they evince that lucerne is, in this point of view, far superior to tares. This vegetable has also been successfully employed in soiling sheep and hogs; and, as the latter does not feed down so closely as the former, Mr. Young thinks they may be admitted upon lucerne plantations with safety; and that a small field planted with it, near the farm-yard, "would be of admirable use and profit."

Lucerne is also made into hay; but this management is less profitable than that of soiling cattle with it in a green state. Where, however, it is to be made into hay, it should be so cut, and the swaths so exposed as to dry quickly, without shaking about more than is necessary; as the leaves will be less liable to be separated from the stems, and the hay is consequently of more value.

(*To be continued*)

NATIVE BREED OF CATTLE.

Mr. Editor,

In the 17th number of the American Farmer, you notice Col. Pickering's four letters on improving *the native breed* of cattle, very justly observing, "the public will be much indebted to Col. Pickering for the discussion upon this important subject." You add—"*in the outset of which he observed*, 'at any rate improvements may go hand in hand, and be mutually beneficial to both sorts of improvers.'"

Pray allow me to quote, what Col Pickering DID SAY IN THE OUTSET, in the *first* paragraphs, of the *first number*, upon improving the *native* breed of cattle.

"Whereas half a century, or more might elapse, before a *general* improvement by foreign crosses, could be effected. It remains, too, to be ascertained, whether any other breeds, really deserve the preference in New England, to our native race, improved as it may be, and in so much less time than will be possible by means of a small number of imported cattle."

I have long entertained, and repeatedly expressed the opinion, that a fine breed of cattle, peculiarly adapted to the combined objects of the farmers of Massachusetts, and indeed of all New England, might be most readily and extensively obtained, by the spirited exertions of substantial farmers to improve our native breed.

A New England Farmer.

Hartford, Conn.

ON DIPPING SHEEP.

To the Editor of the Farmer's Journal, (Eng.)

Sir, *Yorkshire, Jan. 18, 1825.*

As no one has favoured your correspondent B., in your journal of the 1st ult., with a method of dipping sheep and tags, I have presumed to state my method; i. e., first provide a tub 40 inches long at the top, 36 inches long at the bottom, 23 inches deep, 18 inches wide at the top, and 13 at the bottom: such a tub will contain a 20-stone (160 lbs.) sheep; then prepare the wash; say for 25 sheep or lambs, 3 lbs. of soft soap dissolved in two gallons of soft water (during the process soft and warm,) in a tub, and 1 lb. of arsenic and 2 lbs. flour of brimstone, diluted together in another tub by two gallons of warm water, because the soft soap does not dilute kindly with the arsenic. Commence dipping with as small a quantity of wash as will dip a small lamb, say 5 gallons of water; to which add two quarts from each of the diluted drugs; and for each sheep after add four quarts of water and one pint from each of the drug vessels; and when a sufficient quantity of wash is in the tub, one mixture may supply two sheep, but not more than two without repeating; for I know from experience, that were the drugs mixed with twenty gallons of water at the commencement, the first four sheep would imbibe as much of the soft soap as the last sixteen. All the mixtures should be stirred frequently with a half-worn broom.—Twenty gallons of this mixture will wash 25 lambs in wool, and as many ewes when new shorn, and so on in proportion. I believe when new shorn is the most proper time for dipping, as then the lice, &c. most abound, and the sheep have less wool to be injured by the arsenic, &c. The sheep should be well drained into the wash-tub, by laying them on something suitable for the purpose: the sulphur is to prevent the flies attacking the sheep.

RURAL ECONOMY.

POULTRY.

FROM THE EUROPEAN MAGAZINE.

Sir—As the following account, together with the few observations I have made on the management and feeding of fowls, may prove acceptable, and afford some useful hints to many among the numerous readers of your entertaining and widely-circulated miscellany, you will oblige me by giving them a place in your work.

I procured two pullets of the black Spanish kind, which were hatched in June, 1818, and fed them constantly myself twice a day, alternating their food, that is, I gave them corn in the morning, and in the afternoon boiled potatoes mixed with *fresh* bran, but I never allowed them to take a *full meal* of corn. They had a small orchard to range in, where, in the course of the day, they occasionally picked up worms and other insects; and, I have observed that poultry of all kinds eagerly seek for animal food even after they have satiated themselves with corn: indeed, I conceive a portion of animal food essentially requisite to preserve them in a healthy state.

The above mentioned pullets began to lay about the middle of November, and continued to do so till within the last ten days, when they began to moult their feathers, having produced *three hundred and sixty-seven eggs much larger and finer than those of the common fowl* Seven eggs weigh one pound avoirdupois, so that I have been furnished with the astonishing weight of more than 53 pounds of nutritious and wholesome food from *two hens* They were never *broody*, nor shewed a disposition to sit at any time during the whole season, and I understand this property is peculiar to this species of fowl: it is, however, an advantage than otherwise, as the common kinds can incubate their eggs, and foster their young.

G. C. JENNER.

October 14th, 1819.

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* Annals of Agriculture, vol. xxv.

Mattoponi, 7th August, 1825.

Friend Skinner.

I was thinking of giving thee some account of the extreme drought and bad appearance of our crops, both of corn and tobacco, when it occurred to me I would look over thy paper of the 5th inst., to see what was said about it in other sections of the country, when my eye caught thy "clear and simple directions for making cider," in reading of which I was much amused by thy humourous dialogue between my neighbours "Likeit and Strikeit."* Indeed, friend Skinner, I am not aware of their being more addicted to the use of "burning liquors" than others; and, perhaps, the neighbourhood of Mattoponi is as exempt from a too free use of them as most places, *your great city excepted*, where you can indulge in a more agreeable beverage; though we will challenge you in pure spring water, and I could wish thee had a fountain as clear, pure and cool this hot, dry weather, as the "Tan Yard spring," which, no doubt, is sometimes injured by the "Colonel's treat." I am sorry to say, that the rain thou speakest of passing over thy friend "Bowie's corn," *past too high to reach it*, and that both the "unrighteous and righteous" seemed to fare alike, as there seems to be no benefit from such a passing. Now, if thee will visit thy friends during this very severe drought, thee may receive a hearty welcome, get pure spring water, and mix it if thee pleases with a little of the "burning liquors," having no "malt-beer or fumigated cider" to offer thee—but such as we have on Mattoponi thou art heartily welcome to, and if we should be lacking in good things for thy accommodation, then we will try thy friend C's store. Thee shall also have thy water in a "stone pitcher," for which thee seems to have a liking, and thy horse shall be put to *sweet* hay, which will save our "old paling." I am pleased with thy publication, and trouble thee with this to let thee know it, and at the same time to inform thee, that however inattentive we may be, yet, perhaps, we are not more so than thy friends are in many other sections of thy country—nay, if thee had laid thy scene somewhere on the *south side* of the Patuxent, say about H. C**** where thou mayest be well acquainted, it might have been more appropriate. Though thou most be assured I am gratified with thy publication—it amuses, and at the same time may correct evil habits where they exist.

Thy friend,

A Planter.

N. B. The drought is excessive, and our crops have a miserable appearance, though not so bad as in the year 1816, when the spots were so frequently seen in the sun, *and frost every month through the summer*, which may be mentioned to W Howard.

MORTAR OF POTATOES.

By M. Cudet de Vaux.

In a court yard there was a wall, the part of which nearest the ground had been repaired ten times, so that the mason hesitated to repair it any more, when I proposed to him to mix boiled potatoes with his plaster. Let me confess it; he laughed in my face, and shrugged his shoulders. However, I went to the hog's trough, took out some boiled potatoes, and put about a pound into the mason's trough. The repair was completed, and the wall has remained in good condition for several years, offering the following phenomenon, viz.—It retains its solidity, notwithstanding the efflorescence on the surface of saltpetre, which is found crystalized. The result naturally led me to mix boiled potatoes in the composition of the coat of plaster, and still more of argillaceous earth; which has perfectly succeeded on a shed in a garden, which is exposed to every wind, and the sides of which are composed only of hurdles, covered over with a mixture of argillaceous earth and boiled potatoes.

If these particulars could come to the knowledge of the poor people in the country, their wretched hovels would become habitations dry withinside, and consequently healthy.

NEW VERTICAL KILNS.

J. Jones, respectfully solicits the attention of persons engaged in the corn trade, to his Vertical Kilns for drying grain, by which perfect sweetness and equality of drying is ensured; nearly all the labour is saved, as the grain continues in slow motion during the whole time it is drying, and regularly discharges itself; the consumption of fuel is very small, and the Kiln, though occupying very little space, will dry on an average, nearly one hundred quarters per day, or the quantity may be increased to any required extent.—Applications, addressed (post free) J. Jones, 150, High Holborn, London, will meet immediate attention. [*English paper.*

MISCELLANEOUS.

SUMACH.—RHUS.

Natural order, Dumosæ. A genus of the Pentandria Trigynia class.

———— "Not a flower
But shows some touch, in freckle, streak, or stain,
Of his unrivalled pencil. He inspires
Their balmy odours, and imparts their hues,
And bathes their eyes with nectar, and includes,
In grains as countless as the sea-side sands,
The forms with which he sprinkles all the earth."

[Of all the shrubs that variegate and beautify our fields, there are few more beautiful than the Sumach growing in its natural luxuriance. We have often been surprised that gentlemen who go to so much expense to ornament their lawns and pleasure grounds with costly exotics, should leave this exquisite shrub to live and die neglected, in obscurity. The branches are clean and polished, and the leaves of the most delicate colour and figure, with which the berries form a striking and beautiful contrast. It has, for the sake of ornament and cleanliness every thing to recommend it; but that it is not a costly stranger, expensive to purchase, and more expensive to keep. But though slighted as a native plant, we apprehend the Sumach will come to be prized as an object of value for cultivation. Its spontaneous and luxuriant growth in a great portion of the country, indicates the congeniality of our soil and climate to its production; and in the American Farmer of the 22d ult. it is stated by Mr. Foley, Post Master at Assumption, in Louisiana, that "it grows here very large, and I presume as our climate is somewhat similar to Sicily, the quality must be nearly the same, if gathered and cured at the proper season. I therefore have to request you to instruct me, as soon as convenient, in the *best manner of curing it*—and as soon as I hear from you, I shall follow your instructions, and forward immediately such a quantity as will enable the manufacturers to judge of its value."

This letter to Mr. Skinner, having been transmitted to the New York Statesman, a correspondent of the Editor of that paper has politely communicated the following instructions.]

Sumach.—In reply to the inquiries of John Foley, Esq. of Louisiana, through the medium of the American Farmer, as to the proper time for gathering, and best manner of preparing Sumach for market, one of our correspondents has enabled us to furnish the following information.

The branches of the American Sumach, for dyeing and tanning, should be gathered, on or about the 20th of July, when the plant is in its milky state, and must not be exposed to rain or dew, but dried under sheds. When thoroughly dried the cuttings are to be threshed upon the barn floor, in the same manner as grain, and the threshing sifted through a riddle, same as grain, then packed in sacks, when it is ready to be sent to market. The peculiar excellence of this valuable material consists in its being gathered in the proper season, preserved free from the sun, from all dampness, and also in the fineness of the threshing. The rays of the sun, after gathering, will extract the colour, and dampness injures its dyeing and tanning qualities. The more bright, green, and fresh it appears, the more ready the sale, at the best market price.

[Of the history of the Sumach, the following are some of the particulars mentioned by Philips:]

The name of Sumach for this shrub is the same by which it is distinguished by the Arabs. The Greeks called it Ρους *rhus*, and *rhous*, from the verb *rheo*, I run, or flow, on account of the nature of the root, which spreads itself to a great distance, sending up numerous suckers The Latins followed the Greek name of this plant; but as its seed was anciently used for seasoning meat instead of salt, it was called *Rhus Obsoniorum**, and *Rhus Coriaria,* from its use in dressing of leather, and for which purpose its branches are still in great demand among the Turks for tanning their Morocco leather. The elm-leaved sumach, *rhus coriaria*, grows naturally in India, Syria, about Aleppo and Rama, in Italy, Spain, and the south of France, and also near Algiers in Africa.

Dr. Turner says, in his Herbal of 1568, "the Sumach groweth in no place of England, or Germanye, that ever I sawe, but I have sene it in Italy, a little from Bononye, in the mounte Appennine." It appears, however, to have been cultivated in this country previous to 1597, as Gerard mentions it in his Herbal of that year; and from the Catalogue of the botanic garden at Oxford, it appears to have been planted there before the year 1648.

The flowers of this species of sumach grow in loose panicules at the end of the branches, each panicule being composed of several thick spikes of flowers sitting close to the footstalks; they are of a whitish herbaceous colour, and appear in July, but seldom if ever ripen their seeds in England.

The Virginian sumach, *rhus typhinum*, is a native of North America, as its name imports. Parkinson is the oldest author who notices it in this country: he tells us, in 1629, that it was then "only kept as a rarity and ornament to a garden and orchard." This species of sumach was formerly called the Stag's horn tree, from the branches being shaped like those of the stag's-horn, and like them covered with a soft velvet-like down, which, both in colour and texture, resemble that of a young stag's-horn.

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*How has a Planter fallen into the mistake of treating as coming *from* us, what appears on the very face of it as addressed *to* us? Our correspondent probably thought it necessary to take some location, some ground to stand upon, while he told his story; but in describing a too prevalent custom, meant, we dare say, no personal application. But we, too, profess to know something of these Mattoponi boys, and none know better than they in what consists the *good things* of this life. We should be afraid, however, nowithstanding the kind invitation of our friend, to be caught amongst them in these dog days—

"——— ——— While angry Sirius sheds
A feverish taint through the still gulph of air;"

when temperance in eating and drinking is so strongly enjoined by prudence and the doctor. They would lead us to forget her, by their hospitality; by temptations of every sort No! no! we will go and beat up their *winter* quarters.

"Pale humid winter loves the generous board,
The meal more copious and the warmer fare;
And longs with old wood and old wine to cheer
His quaking heart." [Ed.

* The Tripoli merchants still find sale for the seeds of this shrub at Aleppo, where they are in common use there at meals to provoke an appetite, being ground into powder as we grind mustard seed.

The leaves are long, and elegantly pinnated with six or seven pairs of leaflets, terminated by an odd one, which hang in a most graceful manner. The shrub grows from ten to fifteen feet in height, and therefore should fill a middle station in the shrubbery, between tall evergreens and lower shrubs. The variety this plant affords in the autumn, by the gay tints of its foliage, is not surpassed in beauty by any shrub we possess, as it is sometimes quite purple, and at others of a fine red, before it changes to its last feuillemort colour. It is one of the trees that is particularly handsome to look down upon.

This shrub, as well as the elm-leaved sumach, is used for tanning leather; and the roots are used in medicine in Virginia and Carolina.

The sumach sends up numerous suckers, by which means it is so easily increased, that there is little occasion to sow the seed when once a single plant is obtained. The Hortus Kewensis notices eleven species of this plant that will endure our winters, and nine species that require the green-house, and one the stove.

[Since the above was sent to the press, we find the following further notice of the article from the pen of a certain Mr. Hopson, unknown to us, but by his very useful writings under that name in the New York papers. This is in fact the very gentleman whom we had in our mind's eye, when we requested friend Prentiss to publish Mr. Foley's inquiries. It was a bait at which we were sure he would bite. Many of his communications on the subject of practical manufactures, and the useful arts, may have unfortunately for us and our readers, escaped us; such as we have seen we have uniformly transplanted to the American Farmer. We must regret that we cannot reckon him amongst our own correspondents, chiefly because some of his writings in other channels may escape us, for we have no hesitation in copying whatever we see that is good, being much better pleased to get a good article at second hand than an original one of inferior merit.]

From the New-York Statesman.

I observe, from an extract in your paper, that a Mr. Foley, of Louisiana, is desirous of having some information relative to the shrub called sumach. It is an article which has come under my notice for many years, as a dealer and as a dyer. The consumption of sumach in this country is already considerable, and is much increasing. It is used by the dyer, and for tanning of leather; and Turkey leather is all tanned with this shrub.

I am not prepared to give information on the proper time of gathering the shrub, nor have I been able to collect any instructions relative to it from works published on the subject. I should presume, however, that the proper time would be when the annual shoots arrive at their full degree of foliage. I should deem the most important fact to the cultivator to be the obtaining of the right species, for the varieties are numerous, and among them only one appears to be cultivated on the European continent for the use of the dyer and tanner. When the right kind has been obtained, and the shoots gathered and well dried, it will be necessary, in order to give to it the European value, that it should be ground to a fine powder.

There are several species of sumach in this country. The *rhus coriaria*, or elm-leaved; the *rhus glabrum*, called scarlet sumach, from the colour of its acid berries—the *rhus tyhinum*, called Virginia sumach—the *rhus copallinum*, or the lentiscus leaved sumach, &c.

The *rhus cotinus*, or Venice sumach, is also an important article in dying. It is commonly called young fustic, the stem and trunk of the shrub, and the root, are bought and employed for dying an orange yellow. The leaves and stalk, when bruised, have an aromatic but pungent and acid scent.

The sumach called Sicily and Malaga, are the most sought after, and produces the greatest price. It looks much yellower when ground than the American, and works more powerfully. It is the *rhus coricria*, which grows naturally in Syria, Palestine, Spain and Portugal, as well as in this country, yet the American is very inferior to that obtained from Spain and Sicily. It is altogether probable that the deficiency in the American sumach arises from their gathering from the wrong species, from the mode of cultivating it, from the quality of the land, or from having been grown in too northerly a climate. I should consider that Louisiana would be admirably calculated for raising it. It is diligently cultivated in Spain and Portugal. The shoots are cut down to the roots every year, then dried, that they may be ground to powder in a mill.

As the cultivation of sumach is become important from its great consumption, I have taken some pains to collect the following botanic description, that no mistake may be made by our patriotic cultivators.

Coriaria—elm-leaved sumach—leaves pennate; leaflets oval, bluntly serrated, downy beneath; their common stalk winged in the upper part; flowering in July, and retaining its dense, branched, ample, upright clusters, of deep red, rough, coriaceous berries, even till winter, after the leaves are fallen. The tree is of a dwarf bushy habit, with spreading ascending, round, downy branches, of a soft spongy texture. *Leaves from eight inches to a foot long, of about five pair of leaflets, with an odd one;* paler, downy, and veiny beneath. Flowers greenish, each with a large hoary germen, which becomes a globular, crimson, hair berry, the size of an elder berry. The taste of this fruit is very acid and astringent.

HOPSON.

THE NATURAL AND CULTIVATED PRODUCTIONS OF THE CAROLINAS,

As they appeared to an acute observer, more than a century ago.

Mr. Skinner, *Ryeland, N. C. July* 10, 1825.

Without any preface, I intend giving you a few extracts from a very rare work, which as it is not known, I will give the title in its full length: "The History of Carolina, (both North and South,) containing the Exact Description and Natural History of that Country, together with the Present State thereof—and a Journal of a Thousand Miles travelled through Several Nations of Indians, giving a particular account of their Customs, Manners, &c. by John Lawson, Gent. Surveyor General of North Carolina.—Printed in London, for T. Warner, at the Black boy, Paternoster Row, 1718."

The extract, or extracts, relate to the natural grape vines, at that time seen by Mr. Lawson in the woods of North Carolina, I presume, as he lived in that state, near the town of Bath. He says (p. 112,) "As for that noble vegetable the vine, without doubt it may, in this country, be improved and brought to the same perfection as it is at this day in the same latitude in Europe, since the chiefest part of this country is a deep, rich black mould, which is up towards the freshes and heads of our rivers, being very rich, and mixed with flint-pebbles and other stones; and this sort of soil is approved of (by all knowing gardeners and vignerons,) as a proper earth, in which the grape chiefly delights: and what seems to give a farther confirmation hereof, is, that the largest vines that were ever discovered to grow wild, are found in those parts, oftentimes in such plenty, and are so interwoven with one another that it is impossible to pass between them. Moreover, in these freshes towards the hills, the vines are above five times bigger than those generally with us, who are seated in the front parts of this country, adjoining to the *salts.* Of the wild vines, which are most of them great bearers, some wine has been made, which I drank of. It was very strong, and well relisht; but what detains them all from offering it in great quantities is, they add, that this grape has a *large stone and a thick skin,* and consequently yields but a small quantity of wine. Some essays of this nature have been made by that hon. knight, Sir Nathaniel Johnson, of South Carolina, who, as I am informed, has rejected all *exotic vines,* and makes his wine from the natural *black grape* of Carolina, by *grafting* it upon its own stock. What improvement this may arise to, I cannot tell; but in other species, I own grafting and *imbudding* yields speedy fruit, though I never found that it made them better."

So much for vines: in another part of the same work, speaking of the natural history of the opossum, he says, (p. 120,) "the female doubtless breeds her young at her teats; for I have seen them stick fast thereto when they have been no larger than a raspberry, and seemingly inanimate. She has a *paunch, or false belly,* wherein she carries her young after they are from those teats, until they can shift for themselves. Their food is roots, poultry or wild fowl; they have no hair on their tails, but a sort of a scale or hard crust, as the *beavers have.* If a cat has nine lives, this creature surely has nineteen—for if you break every *bone* in their skin and mash their skull, leaving them for dead, you may come an hour after and they will be gone quite away, or perhaps you may meet them creeping away. They are a very stupid creature, utterly neglecting their safety. They are most like *rats* of any thing. I have, of *necessity, in the wilderness,* eaten of them; their flesh is white and well tasted, but their ugly tails put me out of conceit with that fare. They climb trees, as racoons. Their fur is not esteemed nor used, save that the Indians spin it into *girdles and garters.*"

On page 163, on the natural and cultivated productions of the country at that period, viz. 1706—"But waving this subject till some other opportunity, I shall now give you some observations in general concerning Carolina: which are, first, that it lies as convenient for *trade* as any of the plantations in America; that we have plenty of pitch, tar, skins of deer and beeves, furs, rice, wheat, rye, Indian grain, sundry sorts of pulse, turpentine, rosin, masts, yards, planks and board, staves and lumber; timber of many common sorts, fit for any uses; hemp, flax, barley, oats, buckwheat, beef, pork, tallow, hides, whalebone and oil; wax, cheese, butter, &c. Besides drugs, dyes, fruit, silk, cotton, indigo, oil and *wine,* that we need not doubt of as soon as we make a regular essay. The country being adorned with pleasant meadows, rivers, mountains, hills and rich pastures, and blessed with wholesome, fine air, especially a little backwards from the sea, where the 'wild beasts' inhabit, none of which are voracious."

"There cannot be a richer soil; no place abounding more in flesh and fowl, both *wild and tame,* besides fish, fruit, grain, cider and many other pleasant liquors; together with several other necessaries for *life and trade* that are daily found out, as new discoveries are made. The stone and gout seldom trouble us; the consumption we are wholly strangers to, no place affording a better remedy for that distemper than Carolina."

Thus we learn from one who had an opportunity of seeing this country in its earliest settlement, how wonderfully it was, and is blest, by the hands of Providence.

Lawson was here in 1706, and was employed in the capacity of a surveyor; and therefore much among the Indians He was killed by the Tuskaroras, on the Neuse river.

The work is exceedingly rare; I wish you had it.

as it throws much light on the natural history of our country, particularly the "Carolinas."

Yours, A Constant Reader.

QUANTITY OF BLOOD IN ANIMALS.

Those who have not considered the subject must be surprised at the quantity of blood which passes through the heart of any moderately sized animal in the course of twenty-four hours. In man, the quantity of blood existing in the body at any given moment, is probably from 30 to 40 pints. Of these an ounce and a half, or about three table spoonsful are sent out at every stroke, which multiplied into 75 (the average rate of the pulse,) give 1125 ounces, or seven pints in a minute—*i. e* 420 pints, or 25½ gallons in an hour, and 1260 gallons—*i. e.* nearly 24 hogsheads in a day. Now, if we recollect that the whale is said to send from its heart, at each stroke, 15 gallons, the imagination is overwhelmed with the aggregate of the quantity that must pass through the heart of that animal in 24 hours. It is a general law, that the pulse of the larger animal is slower than that of the smaller; but even if we put the pulse of the whale so low as twenty in the minute, the quantity circulated through the heart, calculated at 15 gallons for each pulsation, will be 432,000 gallons—equal to 8000 hogsheads in twenty-four hours. The consideration of this amazing quantity is, however, a subject of mere empty wonder, if not accompanied with the reflection, that, in order to produce the aggregate amount, the heart is kept in constant motion; and that, in fact, it is incessantly beating, as it is termed, or throwing out the blood into the arteries, from the first period of our existence to the moment of our death, without any sensation of fatigue, or even without consciousness, excepting under occasional corporeal or mental agitation. [*Dr. Kidd, Edin. Phil. Journal.*

NATURAL LIFE OF TREES.

There are various opinions respecting the full age or natural life of trees. The few following instances will show the length of time which trees have been known to exist. Mr. Galyne and others, imagine that from 300 to 400 years form the natural life of the oak tree. An oak was felled in April, 1791, in the park of Sir John Rushout, bart., at Northwick, near Blackley, Worcestershire, England, judged to be about 300 years old. It was perfectly sound; contained 634 cubical feet of timber in the trunk, and the arms were estimated at 200 feet more. In Mr. Gilpin's work on forest scenery, there is an account of oak trees in the New Forest, which had marks of existence before the time of the conquest. The tree in the same forest, against which the arrow of Sir Wm. Tyrrel glanced, and killed King William Rufus, remains still a tree, though much mutilated. In Mr. Robt. Low's "View of the Agriculture of Nottinghamshire," several trees are said to have been lately felled in Sherwood Forest, which were found to have cut in them I. R. or In. R (Rex.) and some had a crown over the letters. Mr. McWilliam, in his "Essay on Dry-rot," goes still farther: he says, that many trees might be mentioned in this and other countries, which bear sufficient testimony of their being far above 1000 years old; and he gives reasons for believing, that several trees now exist above three thousand years old!

The following statement will show the vast increase in the value of canal property. Old Birmingham Canal, original cost per share, *l*140; present value, *l*2,840; annual dividend, *l*100.—Stafford and Worcester canal, original cost, *l*140; present value, *l*960; annual dividend, *l*40. Trent and Mersey Canal, original cost, *l*200; present value, *l*4,600; annual dividend, *l*130, and bonus. Coventry canal, original cost, *l*100; present value *l*1,340; annual dividend *l*44, and bonus.

When the present Archbishop of Canterbury was first made a bishop, it was of course supposed to be through the noble family to whom he is related, and particularly at the request of the beautiful Duchess. The following lines were written on the occasion:—

"Old poets tell, how could it be?
That *Venus* rose from out the *sea;*
But modern times more wonders show—
The *see* from *Venus* rises now."

RECIPES.

TO KEEP OFF THE BEE MILLER.

Mr. Skinner,

After trying the remedy against the bee miller, recommended in your Journal, Vol. 5, No. 6, and various others, all, of which proved ineffectual, I had recourse to *mercurial ointment*; and this I am induced to believe, if it be applied early in the spring, as the fly makes its appearance, and renewed once or twice during the season, will entirely expel them. It is not a costly article, and with a little trouble can be made by any family. It is necessary to remark, that the hive should be tight, smooth, and level, at the bottom; the bench on which it rests, must be planed and made to fit it nicely. After the hive is placed where you design it to remain, mark it around, and then remove it a little, until you spread on a thin coat with a case knife, all around the thickness of the plank your hive is made of, except just where the bees will enter, it is then ready to place again where it may rest secure, but it will be best to examine occasionally, and to keep the bottom of the hive clean, until late in the season, when the bees will occupy it and guard its entrance during the night, as I am inclined to think it is at that time the egg is deposited.

Yours, very respectfully,

ROBT. C. STEPTOE.

CUCUMBERS.

Cucumber seeds should be steeped for two days in milk and honey before they are set, to make the fruit sweeter and pleasanter. Pliny says, to make a delicate sallad of cucumbers, boil them first, then peel them from the rind, and serve them up with oil, vinegar and honey. Columella has recorded a variety of wonderful stories respecting the garden cucumber; and some English authors of great celebrity, have stated that when a cucumber vine is growing, if you set a pot of water, about five or six inches distance from it, it will shoot so much in twenty-four hours as to touch it; but that it will shrink from oil and turn fairly away from it.

TETTER WORM.

After I had the tetter nearly twenty years on my hand, and had used dollars worth of celebrated tetter ointment, which took off the skin repeatedly without effecting a cure, a friend advised me to obtain some Blood Root (called also Red Root, Indian Paint, &c.) to slice it in vinegar and afterwards wash the place affected, with the liquid. I did so, and in a few days the dry scurf was removed, and my diseased hand appeared whole as the other.

I could scarcely believe that a perfect cure was so speedily accomplished by this simple remedy—but as nearly two years have past without the least appearance of its return; I need no longer doubt the fact: and for the benefit of others, I wish the value of the Red Root to be more generally known.

THE FARMER.

Baltimore, Friday, August 12, 1825.

COMMUNICATED.

A practical question—*To Candidates for the next Legislature.*

The patronage of the state has been given in a thousand forms to every particular interest, and the more isolated and particular, the more apt have been all applications to succeed before the Legislature; but what has been done for *the plough?*

It will be proposed at the next session to give, out of the proceeds of lotteries, or some other fund, the sum of only $100 for each county, on the following plan and principles.

In premiums, to be distributed by the Maryland Agricultural Societies on the Eastern and Western Shores, for the best crops and the best manufactures, from each county respectively. If there be no competition from a county, then the sum allotted to it to be reserved or to go into the general funds of the Society. The law to be limited to five years, to try its effects.

This is the rough outline of the system. Will you or will you not support it? that is the question.

A Friend of the Plough.

Cattle Show.—The Dorchester Agricultural Society will hold their first cattle show at Cambridge, on Thursday and Friday, the 10th and 11th days of November next.

Premiums will be given in appropriate pieces of silver plate, for horses, cattle, swine, sheep, implements of industry, ploughing matches, family manufactures, butter, crops, and fermented liquors. The general regulations will be the same as at our exhibitions.

A most laudable and beneficial spirit has been thus manifested by the farmers of that enlightened and hospitable county, who have in the fulness of their zeal and the soundness of their discretion, afforded, exclusively, the means of making this public display of their actual agricultural condition. It would be unreasonable to expect in the commencement, extraordinary excellence in any branch of husbandry; but to the work of improvement, in agriculture no less than in morals, it is often expedient to discover our defects and our faults. Presumptuous and irreclaimable are they who maintain that they have nothing to learn; or, as our correspondent on the first page more elegantly expresses the same thought—"The buoy is sometimes as important to the mariner, in showing him where he ought not to go, as is the pilot, at another, in directing him where he may." We should be glad to see an agricultural exhibition got up in every county of the state, and the *premium* objects and products of each county contending for the palm of excellence at the *state* exhibitions here and at Easton. But what hope can be formed of general improvement, where the lawgivers of a state *essentially agricultural*, deem the interests and the dignity of agriculture unworthy of legislation; nay, where the *people*, the planters and farmers of the state, in choosing their delegates, only ask—who will you turn out? who will you put in? but never inquire what broad foundation they are going to lay in the *laws of the state*, for the more profitable employment of its natural resources—its susceptibility of raising sheep—its improvement by *canals*, by better systems for making new roads and repairing old ones—for preserving timber by confining hogs, which under any circumstances is real economy, &c. &c.

[We find it impossible to make room for all the handbills of Agricultural Exhibitions. If great respect for the parties generally, and particular personal regard for those chiefly instrumental in getting up the Albemarle Exhibition, could swerve us from the line of impartiality, we should insert their handbill *in extenso*.]

☞The Agricultural Society of Albemarle, will hold an exhibition and fair of agricultural implements, live stock, and domestic manufactures, in Charlottesville and its vicinity on Tuesday and Wednesday the 8th and 9th days of November next, (1825) and offer the following premiums to be then and there awarded.

Agricultural Implements—For the best plough to be tested by actual trial, simplicity of construction, efficiency of performance, and facility of draft to be considered. - - - - - - - - $10

The best constructed wheat fan, - - 10

The best straw cutter, - - - - - 5

The best constructed wheat cradle, - 5

Persons from any state may become competitors for premiums offered for Agricultural Implements, and the *manufacturers of Ploughs in particular*, are invited to offer their productions for trial. Those offered for live stock shall be confined exclusively to members of the society, who shall either have bred or owned the animal offered at least four months immediately preceding the exhibition—and the successful candidates for breeding animals shall give a pledge not to remove them beyond the precincts of the society for the next ensuing twelve months.

Premiums for domestic manufactures shall be confined to persons living within the precincts of the society, (that is to say, in some county of the state, in which a member or members reside,) which must have been wrought in their families. In every case where the judges shall think the article offered for premium is unworthy of distinction, the right of rejecting is reserved; and in every case they will require such evidence as they may deem proper to establish the claim.

By order of the Society.

P. MINOR, Sec'y.

The Virginia University gives, as we understand, every promise of accomplishing the high and valuable purposes contemplated by its founders.—Great harmony exists amongst the students, who exceed already one hundred in number, and are said to be remarkably studious and decorous in their habits. Between them and their Preceptors there exists that degree of confidence and esteem which is the sure guarantee of honourable success to both parties. It gives us peculiar pleasure to add, from a source to be relied on, that the distinguished scholars, who were induced, as we may suppose, by an admiration of our political institutions, and by the renown to be acquired in giving repute to a great republican school, to relinquish stations in established seminaries in Europe, are perfectly well satisfied with their situation and prospects. They have, like true philosophers, adapted themselves at once to the manners of our country, and have entered most earnestly into the views of the eminent citizens, acting as Rector and Visiters.

In an early number of the American Farmer, we shall record the "Enactments for constituting, governing and conducting the University;" for we look upon the cause of education as connected with every interest.

Wool, *in New England*.—From a much respected and judicious correspondent at South Adley, Massachusetts, we derive the information, that from 75 to 80 cents have been paid for the shearing of several large flocks of full blood merino sheep, in that neighbourhood, this summer—the wool washed on the back and put up clean; in which state it averages from 3 to 3½ pounds per fleece. Seventy cents was paid for one lot of 4500 of wool of high grade; 50 to 60 cents for ¾ to ⅞ merino, washed on the back and cleared of tags, dirt, &c.

The Erie Canal.—It is asserted in the Albany Argus, that the excavation at the Mountain Ridge, stupendous as the labour has been, is nearly completed; and that the entire Erie canal, from Buffalo to the Albany basin, will be finished, and an uninterrupted navigation opened, in all the month of September. The Black Rock Harbour will be completed, probably, in the course of the present month.

Harrisburg Convention on Internal Improvement

Our paper was ready for the press when we received from a member of the Harrisburg Convention, a sketch of their proceedings, too late, we regret, for insertion in this number.

COMMERCIAL RECORD.

Liverpool, June 21.

Sales of Cotton from the 18th to 21st inclusive, 1190 bales Upland, at 13½ to 16—280 Orleans 14¼ to 15½—201 Alabama 13 to 13¼d.

June 22.—Our Cotton market continues in a very dull state, notwithstanding the great reduction in the price, in consequence, in a great measure, of the public sale last week, which went off very badly. The traders seem quite as unwilling to buy now as they did before the sale. If the crop should not exceed 500,000 bales from the U. States, prices may recover—all depends upon that.

A letter from Liverpool of the 23d June, says:—"Since writing yesterday, the demand for cotton has sprung up. Uplands are now about ¼ higher than they were yesterday."

Tobacco.—Common tobacco of the lower counties is said to bring a better price than it has done these five or six years. As far as can be judged from what has come in for inspection, the last year's crop will fall short by several thousand hogsheads, and the present drought will much affect the growing crop—the prospect of a good price for what will be made, therefore, is thought to be very good.

The following have been mentioned to us as amongst recent sales:

Notley Young, Esq., of Prince George's county, 31 hogsheads, 21 good 10 second, sold at $8 and $5.

S. Owings, Esq., of Holland's island, lower part of Anne Arundel, sold 17 hhds. of common tobacco at $7 round. Y. D. Hance, Esq., of Calvert county, sold one hhd. red spangled for $16 per hundred.

Inspections in the three state warehouses for the last week, 376 hhds.

Wheat.—Since our last a very beautiful crop of blue straw wheat has been sent into our market by Col. John Mercer, of West River. It sold for 91 cents per bushel, but must not be taken as the standard price, unless by those who can send crops got out by machinery, perfectly clean, and weighing sixty-four to the bushel, Baltimore weight!

SALE POSTPONED.

The sale of Mill Brook Farm, Halifax county, N. C., as advertised in No. 9 of the present vol., to take place on the 4th of this month, is postponed till the 8th day of November next, when it will positively be sold, unless previously disposed of by private contract.

August, 1825 ISAAC HILLIARD.

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Memoir on the Culture of Cotton, by a South Carolina Planter—Agricultural Remarks, made by R. Sinclair, on a tour through part of the adjoining states—Artificial Grasses, or Green Crops, continued from p. 149—Correction of Remark of Col Pickering on Native Cattle—On Dipping Sheep—Poultry, Spanish hen—Letter from a Mattoponi Planter—Mortar of Potatoes—New Vertical Kilns—Sumach, description of, and time of gathering—The Natural and Cultivated Productions of the Carolinas, as they appeared more than a century ago—Quantity of Blood in Animals—Natural Life of Trees—Recipes—Communication—Editorial Cattle Shows, &c., &c.—Advertisement—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	to	RETAIL. from	to
BEEF, Baltimore Prime,	bbl.	9 50		10	
BACON, and Hams, . .	lb.	7		11	
COFFEE, W.I. Green, .	—	17½	18	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	25		
Georgia Upland, . . .	—	20	22		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18	—				
CANDLES, Mould, . .	—	11	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	35	36		
FISH, Herrings, Sus.	bbl.	2 18		2 25	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 62	4 75		
Fine, ...	—	4 12			
Susquehanna, superfi.	—	4 38			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	44	48		
Wheat, Family Flour,	—	1 00	1 10		
do. Lawler, ...	—	85	95		
do. Red, ...	—	85	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	42	43		
Barley, ...	—	50			
Clover Seed, Red . .	—	3 75		4	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		25	
Peas, Black Eyed, . .	—	95	1		
Beans White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	200			
HOGS' LARD, ...	lb.	8	9		dull
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, Havana, .	gal.	24	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb	6½	7	7½	8
NAVAL STORES, Tar,	bbl.	1 80	1 87		
Pitch, ...	—	2 50			
Turpentine, Soft, . .	—	2 12	2 25		
OIL, Whale, common, .	gal.	24	26		
Linseed, ...	—	80			
PORK, Baltimore Mess,	bbl	15	15 50		
do Prime, . . .	—	11 50			
PLASTER, cargo price,	ton.	4 00	4 25		
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 25	3 75		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	26			
PEACH BRANDY, 4th pr	—		82	1	
APPLE BRANDY, 1st pr	—	40			
SUGARS, Havana White,	c.lb.	13 00	14 00		
do. Brown, . .	—	10 50	11 50		
Louisiana, ...	—	8 50	11 00		
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	75			
Ginger Ground, . . .	—	7	8		
Nutmegs, ...	—	2 00		2 25	
Pepper, ...	—	19		25	
SALT, St. Ubes, ...	bush	40			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	2 70	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz	4	8		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	20	30		
Skinners' or Pulled,	—	33	37		

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AGRICULTURE.

PRIZE ESSAY.

[The Premium of a silver cup, of thirty dollars value, offered by Robert Oliver, Esq., to the author of the best essay on the natural history of the Mule, and it's value for the general purposes of agriculture, in comparison with horses, was awarded by a committee appointed by the Trustees of the Maryland Agricultural Society, to the author of the following Essay:]

A DISSERTATION ON THE MULE,

With the view of promoting an Improvement in the breed; and of demonstrating the utility of employing him as a substitute for the horse, in the labours of husbandry, canals, &c.

By Samuel Wyllys Pomeroy.

"——*Opinion* is the queen of the world; it gives motion to the springs and direction to the wheels of power."
John Quincy Adams.

"Knowledge is power."—*Bacon.*

Soon after the accession of Charles III. to the crown of Spain, his subjects were prohibited by a severe edict, from wearing *flapped hats* and *long cloaks;* which caused an *insurrection* that obliged him to flee from Madrid, after witnessing the massacre of nearly one hundred of his Walloon guards; and might have terminated in a revolution, but for a speedy revocation of the ediet and banishment of his ministers. An eminent writer introduces the history of the occurrence, by observing, that "it is easier to conquer half the world than to subdue a single prejudice or errour, most nations having a superstitious attachment to those habitudes which they derive from their ancestors, that seemed to come along with them into the world, and with which they were nursed and brought up."

Perhaps it may be deemed by many quite as visionary or absurd, to attempt an introduction of the mule as a substitute for the horse, for the purposes of agriculture and hackney employments, as was the project of the Spanish monarch for compelling his subjects to wear the *French costume*, to the exclusion of one they had been so long accustomed to look upon "as a *distinction* which was the birth-right of every true Spaniard;" and, as we may suppose, so congenial to the indolent habits for which that nation had long been proverbial.

It must be acknowledged that there are serious, though I trust in this age of improvement, not insurmountable impediments—for we have to combat not only hereditary prejudices, or, to speak more correctly, such as have proceeded from a deficiency of means and want of knowledge to develope the valuable properties and to subdue propensities of a contrary character in this hybrid race, but we are met at the threshold by the same species of pride which the Spaniards manifesed in regard to their costume, founded on the enthusiastic, I may almost say superstitious, attachment to the horse.

It is believed that a vast potion of our fellow citizens, and I may with propriety add the people of Great Britain, from whom we have derived some inveterate prejudices as well a those illustrious examples that have had such a powerful influence in leading our country to the high destinies that await her, do not consider that a *mule*, especially a well bred one, would be in himself and in their view, one of the best formed and most distinguished of animals, if they had never seen a horse;—they must admit, however, that he hods the second rank instead of the first—and it s principally from this circumstance that so little attention has been paid to him in both countries. Comparison is the chief cause of his degradation—they look at and give their opinions not of himself, but comparatively with the horse. They seen not aware that he is a *mule*—that he has all the qualities of his nature, all the gifts attached to the connecting and final link of two distinct species, and think only of the figure and *qualities* of the horse which are wanting in him, and that he ought not to have; for he possesses those of more intrinsic value, which the supreme Author of nature has denied to both of his parents.

There are few subjects of animated nature that have engaged the attention of the most eminent naturalists, more than the genus *Equus*, to which the horse and ass, with their *hybrid* offspring, are assigned. *Linnæus*, with a view to establish, by new arguments, his doctrine or theory of the *sexual system* of plants, which *Spallanzani* had attempted to overturn, illustrated their generation by pursuing the chain of nature from the animal to the vegetable kingdom; and has taken prominent examples from the two different productions of mules. He says, "from the mare and male ass proceeds the mule, properly so called, which in its nature, that is, in its medullary substance, nervous system, and what *Malpighi* calls the keel, (*carina,*) *bottom* in sportsmen's language, is latent in, and derived from the mare. But in its cortical substance and outward form, in its mane and tail, resembles the ass. Between the female ass and the horse, the other kind of mule is engendered, whose nature or medullary substance, resembles that of the ass; but its outward form and cortical structure, or vascular system, that of the horse."[*]

The latter kind was called *Hinnus* by the ancients; hence the modern name *Hinny*. They were not held in much estimation by the Romans, according to Pliny, who describes them as difficult to manage, and so slow that little service could be derived from them. *Buffon* has noticed this animal, which he says "is smaller than the mule, as it preserves the diminutive stature of the ass." Hinnys were seldom propagated; but it is said that a number have lately been bred in Spain, probably in consequence of the destruction of mares in the peninsular war, and are represented of good size and more beautiful than the mule; that is, they resemble the horse much more. I understand a few have been bred upon the Spanish Main, no doubt from a similar cause that led to the system in Spain; and if my information is correct, some have been recently shipped to the West India islands, but are by no means esteemed so hardy, or valuable for service, as mules.

Notwithstanding mules have a disposition to propagate, there have been but two or three well authenticated instances recorded of their having *bred;* and those productions were considered monsters. *Buffon* was indefatigable in his researches on the subject; and although he admits that it is possible for both males and females to propagate, he is confident that their parents are of a species distinct from each other. He says "the ass is not a horse degenerated," as some had supposed, "he is neither a stranger, an intruder, nor a bastard—he has, like other animals, his family, his species, and his rank; his blood is pure and untainted, and although his race is less noble, yet it is equally good, equally ancient as that of the horse." This profound naturalist continues a very minute and eloquent comparison between the horse and the ass—some of his expressions I have taken the liberty to apply to the *mule* and the horse in a preceding paragraph.

It may promote the object in view to enter extensively upon the history of the ass; and we commence with the supposition, that when men became so far civilized as to have burdens to *carry*, or required to be *carried* themselves, this animal was the first domesticated for that purpose—and it is reasonable to infer that those of the least *spirit* and most *tractable*, were put in requisition in the first instance; when by breeding *in and in*, without any care in the selection of *sire* or *dam*, became in process of time degenerated to a very inferior grade. Be this as it may, it is an unquestionable fact that different races of the ass now exist, possessing properties as distinct as are found in the species of *camel*. For instance, the *Bactrian* or single hunched camel, called the *dromedary*, by far the most numerous race, being lightly formed, exhibits great activity, and is able to traverse vast tracts with the speed of a *high mettled race horse*. The *Arabian* camel, with two protuberances on his back, is considerably larger, of much stronger form, travels at a pace seldom exceeding three miles an hour, and is capable of conveying such burdens, that the Arabs style him, emphatically, the *ship of the desert;* yet they are of the same species—a cross between them breed and constitute another variety, which multiply, and according to Buffon, have the most vigour, and are preferred to all others.

Ancient writers recognize three or four distinct varieties of the ass. According to the learned Dr. Harris, four different races are indicated in the original Hebrew scriptures, viz: *Paru, Chamor, Aton,* and *Orud.*[*]

The wild ass (*Para,*) was a native of *Arabia Deserta* and those countries which formed the great *Babylonian empire*. They are now found in *Southern Tartary*, in the mountainous districts and saline plains of *Persia*—are migratory in large herds, visiting in winter the northern parts of *India*, and said to be so fleet that no horse can overtake them in the chase. This race are frequently alluded to by the inspired *poets* and *prophets;* and afford *similies* diametrically opposite to those drawn from the domestic race. The sublime description of the former in the book of Job, exhibits such a contrast, that I trust its insertion in this place will not be deemed improper:

"Who from the forest ass his collar broke,
And manumized his shoulders from the yoke?
Wild tenant of the waste, I sent him there
Among the shrubs, to breathe in freedom's air.
Swift as [illegible] in his speed he flies;
Sees from afar the smoky city rise;
Scorns the throng'd street, where slavery drags her load,
The loud voic'd driver and his urging goad:
Where e'er the mountain waves its lofty wood,
A boundless range, he seeks his verdant food."
Scott's Version.

We find, that at a very early period of sacred history, the common domestic ass (*Chamor,*) was employed in all the menial labours of a patriarchal family, while a nobler and more estimable animal (*Aton,*) was destined to carry the patriarchs, *the well born*; and those on whom marks of distinction were to be conferred. They constituted an important *item* in a schedule of the pastoral wealth of those times; of course, attracted particular attention and care. *David*, we are told, had an officer, apparently of high dignity, appointed expressly to superintend his stud of *high bred asses*, or *Atonoth*.

There was another race that has been mentioned by *Aristotle*, and by *Theophrastus*, whom Pliny quotes, which they denominated the *wild mules* that *bred* (*hemi-onos,*) and were found in Cappadocia and Africa. There can be but little doubt but this is the *Hemionus*, or *wild mule* of the Mongalian Tartars, so particularly described by professor *Pallas;* and that it is not a *hybrid*, but actually of the species of ass resembling a mule. This race is identified by Dr. Harris with the *Orud* of scripture.

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[*] See "A Dissertation on the Sexes of Plants," by Sir Charles Linnæus—read before the Imperial Academy of Sciences at St. Petersburgh, Sept 6, 1760, and which obtained the premium of one hundred ducats.

[*] See the "Natural History of the Bible, by Thaddeus Mason Harris, D. D., 1 vol. 8vo., Wells & Lilly, Boston." A work I would earnestly recommend to those readers of the sacred volume, who are desirous to be better acquainted with many allusions to subjects of natural history, founded on their nature, habits, and characteristic qualities, developing beautiful similies, which would otherwise lie concealed—and enabling them to judge more correctly of the propriety of such allusions.

The wild ass of Northern and Western Africa, whose flesh was so much admired by the Roman epicures, may, I believe, be ranked as another distinct race. Adanson, a French naturalist, who visited the river Senegal more than half a century ago, describes those brought from the interior by the Moors, as so essentially different from any he had seen in Europe, (probably those of Spain, Savoy, or parts of France adjoining,) it was with difficulty he could recognize them to be the same species—neither do they answer the description of the wild ass of *Asia*, of which we have been speaking. But his account of them corresponds with the *diminutive* domestic race introduced from Africa, particularly those from *Senegal* and the *Cape de Verd islands;* and from which the small race now in Europe and in this country, may with great probability claim their origin.

The *Arabian* ass, like the horse of that country, is considered as the most estimable of his species—and there are strong reasons for concluding that he is descended from the Hebrew *Aton*, so highly valued by Abraham and by the patriarchs, judges and kings, at subsequent periods of sacred history; and that the same race has been preserved in the ancient *land of Uz*, in some degree of purity to the present time. Indeed, there can be but little doubt on the subject, if we admit the fact, that the habits, manners and pursuits of the descendants of *Ishmael* have continued, with scarcely an *iota* of variation, from the day they took rank among the nations of the earth. The position is greatly strengthened by the information I received some years since from an intelligent traveller of undoubted veracity, who had visited *Arabia* on the south-western side of the peninsula to *Mocha;* and on the eastern, as far as the mouth of the *Tigris*. He represented the *superior* race of asses of that country as most beautiful—of perfect symmetry, great spirit, activity and vigour. He had seen those that could not be purchased for less than *four or five thousand dollars*—an enormous price, considering the value of money among those people.* I understand from him, that the Arabs were as tenacious of preserving the *pedigree* of their *horses*, as the most careful breeder for the *turf* in England—and not less so of their *asses*. The descent of some of them they trace to those in the train of the queen of *Sheba*, when she visited Solomon—as they also do that of their *horses* to the numerous *stud* of that wise and gallant king.

Dr. Harris supposes the *wild ass* (*Para.*) to be the *Onager* of the ancients; and that the *Aton* was of a different kind. My impressions coincide with the opinion of the learned divine—but may not writers of different periods have confounded the wild ass with the Aton in their representations of the *Onager?* for it is not improbable, but that the *Aton* was of the most improved breed known, produced from crosses of a choice selection of the domestic, the wild ass, and the Hemionus, or wild mule—which last professor Pallas recommends to complete the perfection of the species. This supposition is supported by *Buffon*, who infers as a certain fact, that by a cross of the remotest of different races of the ass, the most beautiful productions are obtained.

Mules were in use and highly esteemed at a remote period of antiquity; and are mentioned in scripture as of importance in the equipage of princes. Herodotus, who is styled the *father* of *profane history*, frequently speaks of them; and it is known that they were introduced in the *chariot races* at the Olympic games, in the seventieth Olympiad, about five hundred years before Christ. The Romans well knew their value. Pliny informs us, from Varro, that *Q. Axivs*, a Roman senator, paid four hundred thousand sersterces, upwards of *thirteen thousand dollars*, for a *male ass*, for the propagation of mules. And he says further, that the profit of a *female ass* in breeding stock for the same purpose, was estimated in *Celteberia*, now the kingdom of Valencia in Spain, at a like sum. We may infer from a passage in *Tacitus*, and in Plutarch's life of *Marius*, that *mules* were generally employed to transport the baggage of the Roman armies; and that it is not improbable the superior officers rode those of a high grade, having their horses led, except when they engaged an enemy. It seems that the *dilletanti* of Rome held them in great estimation; as we are informed that the mules of *Nero* and *Poppea* were shod with *gold* and *silver*—not *plates*, as iron shoes are now formed, but the *whole hoof* enclosed.

Columella, who in the reign of the Emperor Claudius, published the most valuable treatise on the husbandry and economy of the Romans that has been handed down to us, has given very particular directions for breeding *asses* and *mules*. He was a native of *Cadiz*, and owned estates in Spain, where it appears that the finest mules were then bred.

As it is not requisite to pursue our history of the mule any farther among the ancients, we shall drop their appellation of *male* and *female ass*, and adopt the modern one of JACK and JENNET.

Spain has continued to support the reputation for a superior race of mules to the present period; and it is probable that the Arabian breed of Jacks were introduced by the Moors, when they held possession of that fine country, which, by crosses, and the effects of climate and soil, have formed two valuable races: which we shall notice in the sequel. The Portuguese race have been generally considered as differing but little from the Spanish; those however, that have come within my view appear evidently inferior. It was not until near the close of the sixteenth century, that *coaches* were used in France, before which, it is said, the nobles rode to court, parliament, &c. on *mules* that were brought from the vicinity of the Alps and Pyrenees. They were usually black, of large size, well made, and mostly bred from fine *Spanish mares*. Savoy has long been noted for an excellent breed of mules. None very extraordinary are found in Italy, those used by the *Velterino*, are strong and of a respectable size, but of a sluggish and debased spirit. Very little can be said of those animals in *Great Britain*. The Catholic prelates brought over a number of superb mules, prior to the Reformation, but in the reign of *Elizabeth* so little was known of them, that a writer of that period says, "in Devonshire some were produced by a *Jack* brought from France, and were *knocked on the head* by the people, who viewed them as monsters." A superior race of mules were bred in *Flanders* from Jacks introduced by the Spanish monarchs while they held dominion in that country. Fifty of them were brought to England by the *Duke of Cumberland*, presented him by the *Empress Queen*, and from their beautiful appearance engaged the attention of a few individaals; but the spirit soon subsided. Notwithstanding those who bred and used them, were warm in praise of their utility.

Among a voluminous mass of treatises on agriculture and rural economy, published in that country for near a century past, scarce a line can be found devoted to the mule; except by *Dr Anderson*, who, in his "Recreations in Agriculture," has made a few judicious remarks on the subject.

In Sir George Staunton's account of Lord Macartney's embassy to China, we are told that mules are valued in that economical empire, at a much higher price than horses. In our own country, prior to the war of the revolution, a few Jacks of an ordinary kind were imported—a small number of mules bred; and all exported to the West Indies. I have reference to New England, as I am not aware that any attention was paid to the system in the Middle, or Southern states, though it is not improbable that some valuable mules may have been raised by the farmers and planters for their own use. When peace took place, the price of mules in the West Indies excited attention to the breeding of them, which was principally confined to Connecticut; and several cargoes of the small race of Jacks were imported from the Cape de Verd islands, and St. Michael's one of the Azores. It should be observed that the exportation of Jacks from Spain, or any of her colonies, was strictly prohibited, and continued to be until after the Peninsular war. There might have been, however, a few smuggled from the Spanish part of Hispaniola into Cape Francois, and from thence introduced, but they were vastly inferior to the Spanish Jacks. From this miserable stock a system of breeding mules commenced, the best calculated to deteriorate any race of animals that has been, or could be devised, since their creation. The purchaser of a *Jack* when about to commence *mule dealer*, made little inquiry concerning him but of his capacity to *propagate* a mule. He placed him in a district where there was the greatest number of mares of qualities so *inferior* that their *colts* would not compensate their owners for the expence of taking them to a *horse*, and contracted to purchase their mules at four months old. Those are kept in herds, with precarious shelter in winter, having ample opportunities afforded them to mature and transfer that propensity for *kicking*, which seems at first merely playful, into an habitual means of defence, to be exercised when the *biped* or any other race of animals approach them. In this *kicking seminary* they remain two years, and are then driven to market. At subsequent periods, a few Jacks of higher grades were procured, from which a small number of good sized mules were bred, and a few of them broke. The breed of Jacks have somewhat improved, and *mule dealers* are now located in most of the New England states and some parts of New York. But the system as above detailed, with few exceptions, has continued; and it is from such a race of Jacks and such a system of breeding and management, that the mules have been produced, with which the farmers and planters of *Maryland*, *Virginia*, and the *Southern states*, have been supplied from *New England;* and such have furnished a criterion for a great portion of our countrymen to form an estimate of the value and properties of this degraded animal. It affords great pleasure to be enabled, for a short time at least, to pursue our investigations in an higher sphere.

Several of my friends who had viewed the Jacks and mules, at Mount Vernon, in the life time of General Washington, gave such glowing descriptions of them, and understanding that part of that stock was inherited by George W. P. Custis, Esq. I was induced to address a few queries to him on this subject; this gentleman with his characteristic urbanity, very promptly furnished replies, with liberty to make such use of them as I pleased, and I cannot do better than to transcribe them from a letter received about three years since. Mr. Custis observes:

"The ROYAL GIFT and KNIGHT OF MALTA, were sent to General Washington about the year 1787;—the *Gift*, with a JENNET, a present from the King of Spain; and said to have been selected from the royal stud. The *Knight* I believe was from the Marquis de la Fayette, and shipped from Marseilles. The *Gift* was a huge and ill shapen Jack, near sixteen hands high, very large head, clumsy limbs, and to all appearance little calculated for active service; he was of a grey colour, probably not young when imported, and died at Mount Vernon but little valued for his mules, which were unwieldy and dull

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* *Neibuhr* remarks, "there are two sorts of asses in Arabia: the smaller, or *lazy* ass, as little valued there as in Europe; and a large and high spirited breed, which are greatly valued, and sell at a very high price; I preferred them to horses." See Neibuhr's travels in Arabia

The *Knight* was of a moderate size, clean limbed, great activity, the fire and ferocity of a tiger, a dark brown, nearly black colour, white belly and muzzle; could only be managed by one groom, and that always at considerable personal risk. He lived to a great age, and was so infirm towards the last as to require *lifting*. He died on my estate in New Kent, in the state of Virginia, about 1802 or 3. His mules were all active, spirited, and serviceable; and from *stout mares* attained considerable size.

"General Washington bred a favourite Jack called Compound, from the cross of Spanish and Maltese. The *Knight* upon the imported Spanish *Jennet*. This Jack was a very superior animal; very long bodied, well set, with all the qualities of the *Knight*, and the weight of the Spanish. He was sire of some of the finest mules at Mount Vernon, and died from accident. The General bred mules from his best coach mares, and found the value of the mule to bear a just proportion to the value of the dam. Four mules sold at the sale of his effects, for upwards of $800; and two more pairs at upwards of $400 each pair; one pair of these mules were nearly sixteen hands high. The only Jacks I know of at present, of the genuine Mount Vernon stock, are, one sold by me to Judge Johnson, of South Carolina, for five hundred dollars, at two years old; one given by me to William Fitzhugh, esq, of Ravensworth, and one which I believe is possessed by my uncle, George Calvert, esq of Riversdale.

"The Jack purchased by Judge Johnson, I have understood, has a very high reputation in the south.

"Upon losing my groom (Peter) who was the first and last groom to the Mount Vernon Jacks, I parted with my stock.

"There are many Jacks that have come into the country of late years, but of their value and properties I am unable to speak: though I rather presume that they are generally small, and only fitted to get mules for the cotton cultivation in the light lands of the south. Some very fine mules are raised about Hagerstown, Maryland, from Jacks of the old breed; they are bred from stout wagon mares.

"As to my opinion of the value of mules, I shall always appear extravagant. I have scarce a horse on my estates for agricultural purposes, nor would I accept of one as a gift, (except for road wagons) of which I have no need, as my property lies upon navigable water. Nothing ever was so good as mules for the uses of this, our southern country; they live longer, eat less, and above all, are better suited to our slaves, than any other animal could possibly be: their strength, patient endurance of privation and hardships, slender pasturage, exposure—and in short, all those ills to which animals are subject where slaves are their masters, give to mules a decided preference in all the agricultural states of the south.

"I do not know of any being trained to the purposes of pleasure carriages. They are often ridden, and go pleasantly, with great surety of foot. I have no doubt but that in time they will generally be used for carriages, and would particularly suit mail coaches; they are very swift, and have great durability in travelling."

The *Knight of Malta*, mentioned by Mr. Custis, was unquestionably the first Maltese Jack ever brought to the United States. The second came in the frigate Constitution, on her return, I think, from her first cruise in the Mediterranean; and, I have understood, was sold in the District of Columbia, or one of the adjoining states. Since that time a number have been introduced by officers of the *navy* from *Malta*, and the large *Spanish breed* from *Minorca* and *Majorca*. From the Mount Vernon and those stocks, some fine mules have been bred in the middle states, and probably farther south. A few valuable *Maltese* jacks have been imported in merchant ships.

The impressions received, when on a visit to the West Indies in my youth, by observing, on the sugar plantations, the severe labour performed by mules in *cane* mills, induced me, when I commenced farming, to purchase the first well broke mule I could light on; and notwithstanding he was so small as to require a vehicle and harness constructed purposely for him, his services were found so valuable, and the economy of using those animals so evident, that I was stimulated to great exertions for procuring several others of larger size; in this I succeeded, after great difficulty, to such an extent, as to have had more labour performed by them on *farm* and *road*, for thirty years past, than any person I presume, in New England; and every day's experience has served to fortify my conviction of the superior utility of the mule over the horse; for all the purposes for which I have proposed him as a candidate. And it should be considered, that those I have used were of an ordinary breed, vastly inferior to such as may be easily produced in our country, by attention to the introduction of a suitable race of *Jacks*, and a proper system of breeding and management. The question occurs, how is this to be effected? I will premise, that there exists a strong analogy between three varieties of the horse, and those of the domestic ass, considered the most valuable. We have the *Arabian*, the *hunter*, and the stout *cart-horse*. There is the heavy *Spanish Jack*, with long slouching ears, which Mr. Custis has described, that answers to the cart-horse; another Spanish breed called the *Andalusian*, with ears shorter and erect, of tolerable size, plenty of bone, active, more spirited, and answering to the hunter. Then comes the *Arabian Jack*, with ears always erect, of a delicate form, fine limbs, and full of fire and spirit. Judicious crosses from these varieties, will be requisite to produce such kind of mules as may be wanted for general purposes. From the small Jack of *African* origin, with a *list* down his back and shoulders, are bred a small race of mules, by far the most hardy of any. With attention to selection in breeding the Jacks, with, perhaps, a *dash* of some cross of the foregoing description, a stock of mules may be produced, preferable to all others for the light lands and cotton culture of the middle and southern states.

To procure any number of *Arabian* Jacks from their native country, is hardly practicable at the present time. *Egypt* has been celebrated by Sonnini and other travellers, for superb Jacks of the Arabian breed, which probably has been often improved by those introduced by the Pilgrims from Mecca. I apprehend no great difficulty in obtaining them from that country. There is, however, no question but the *Maltese* Jacks are of the *Arabian* race, more or less degenerated. The most of those brought to this country that I have seen, were selected on account of their *size*, and had been used to the draught. I should recommend the selection of those that are esteemed most suitable for the *saddle*, as likely to possess greater *purity of blood*. A Jack of this kind was, a number of years since, imported from Gibraltar, that had been selected by a British officer at Malta; and very much resembled the *Knight of Malta* described by Mr. Custis. I found upon a careful examination, that he differed but little from the description I had heard and read of the true *Arabian* race; indeed I could discover some prominent points and marks, that agreed with those found, by professor Pallas, to belong to the *Hemionus* or wild mule of Mongalia. From this Jack I have bred a stock, out of a large *Spanish Jennet* of the *Andalusian* breed, that correspond very minutely with Mr Custis's description of *Compound* bred by General Washington, and also a *mule* that now, not three years old, stands fifteen hands, and has other points of great promise.

Such have been the ravages of war and anarchy in Spain for a long time past, that the fine race of *Jacks* that country once possessed have become almost extinct. In Majorca and probably some part of the coast of Spain opposite, the large breed may be obtained: and there formerly was a superior race in *Andalusia*, which it is hoped have been preserved. Crosses on one of these breeds by the *Arabian* or *Maltese*, I consider indispensable to furnish a race of Jacks for the production of the most desirable mules, uniting the weight and bone of one, with the spirit and vigour of the other; although their height will in a great measure depend on the mares, yet if sired by full blooded Maltese Jacks, their limbs are too slender and their pasterns too long for heavy draught; but for the *saddle*, especially from blood mares, they are admirable, and out of stout mares suitable for light carriages.

My attention has been but lately directed to breeding mules; and those intended only for my own use. The system adopted is to halter them at four months, and have the males emasculated before six months old; which has great influence on their future conduct, and is attended with much less hazard and trouble, than if delayed until they are one or two years old, as is the general practice. If they are treated *gently* and fed occasionally out of the hand, with *corn, potatoes*, &c. they soon become attached; and when they find that "every man's hand is not against them," will have no propensity to direct their heels against him, and soon forget they have the power. In winter they should be tied up in separate stalls, and often rubbed down. By such treatment there is not more danger of having a vicious mule than a vicious horse—and I am decidedly of opinion, that a high spirited mule so managed and well broke, will not jeopardize the lives or limbs of men, women, or children by any means so much as a high spirited horse, however well he may have been trained.

The longevity of the mule has become so proverbial, that a purchaser seldom inquires his age. *Pliny* gives an account of one, taken from Grecian history, that was *eighty years old;* and though past labour followed others that were carrying materials to build the temple of *Minerva* at Athens, and seemed to wish to assist them; which so pleased the people, that they ordered he should have free *egress* to the grain market. Dr. Rees mentions *two* that were *seventy years old* in England. I saw myself in the West Indies, a mule perform his task in a *cane mill*, that his owner assured me was forty years old. I now own a *mare* mule, *twenty-five years old*, that I have had in constant work twenty-one years, and can discover no diminution in her powers; she has within a year past often taken upwards of a ton weight in a wagon to Boston, a distance of more than five miles. A gentleman in my neighbourhood has owned a very large mule about fourteen years, that cannot be less than *twenty-eight years old*. He informed me a few days since, that he could not perceive the least failure in him, and would not exchange him for any farm-horse in the country. And I am just informed, from a source entitled to perfect confidence, that a highly respectable gentleman and eminent agriculturist, near *Centreville*, on the Eastern shore of *Maryland*, owns a mule, that is *thirty-five years old*, as capable of labour as at any former period.

The great Roman naturalist, in one of the most beautiful passages of his elaborate history of nature, observes that "*the earth is constantly teazed more to furnish the luxuries of man than his necessities.*"[*]

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[*] "It is the earth that, like a kind mother, receives us at our birth, and sustains us when born. It is this alone, of all the elements around us, that is never found an enemy to man. The body of waters deluge him with rains, oppress him with hail, and drown him with inundations; the air rushes on in storms, prepares the tempest, or lights up the volcano: but the earth, gentle and indulgent, ever subservient to the wants of man, spreads his walks with flowers, and his table with plenty; returns with interest every good committed to her care, and though she produces the poison, she still supplies the antidote, though *constantly teased more to furnish the luxuries of man, than his necessities*, yet, even to the last,

We can have no doubt but that the remark applied with great justice to the habits of the Romans in the time of Pliny; and I am much mistaken if ample proofs cannot be adduced, that it will lose none of its force or *truth*, at this present period, in all northern climates, or any section of the United States where the horse is employed for *agriculture* as well as for pleasure. Far be it from me, however, to disparage this noble animal, on the contrary I feel a strong attachment for him; and at the same time a full conviction, that the substitution of the *mule*, for the purposes before stated, as extensively as may be consistent with the requisite production of each species, will have the effect of restoring the horse to the station from which he has been degraded, and place him, as in former ages, upon a more dignified footing—an object of *acknowledged* luxury; and thereby introduce a more correct system of breeding and management, in which our countrymen are so generally deficient, consequently more perfect animals and such an advance in the price of them, that will afford the farmer what he is now a stranger to—such remuneration as will make his *brood mares* a profitable species of stock. And it is obvious, that the system will be followed by an improvement in the breed of *mules*, in the same ratio as the miserable race of *scrub* mares, which are now consuming the profits of agriculture, shall become extinct.

It does not appear that the horse was employed by the *ancients* for any purpose of husbandry. The *ox* and *ass* drew the *plough* and the *wain*, and performed all kinds of drudgery until after the *feudal system* was established in Europe; when the numerous *retainers* of the *feudal lords*, who held their lands by the TENURE of performing *knight's service*, found themselves under the necessity of making the horses they were obliged to keep, contribute towards their support in the cultivation. From this time I believe, we may date, and to this cause may be attributed the introduction of the *horse* for the purposes of agriculture. Since that period, the history of Europe is little else than the annals of *war* and its preparations; and no material for that *scourge*, except the deluded *human victims*, seems more necessary than the horse; accordingly we find, that throughout the whole country, from the *Rhine* or the *Seine*, to beyond the *Danube* and *Vistula*, which has been the principal *arena*, the system of agriculture has embraced, extensively, the breeding of horses of different grades and forms adapted to the several uses in war. Indeed whole provinces were appropriated almost exclusively to the rearing those animals for disposal to the different combatants; and it must be obvious, that their general use in husbandry, at the same time, would follow as a necessary consequence. It cannot be expected therefore, but that the *Dutch* and *Germans* who have emigrated to our country, should bring with them such strong predilections for the horse, which have continued with most of their descendants, especially in those sections where communities of that respectable and industrious portion of our population have been located. In *Great Britain*, to the causes which have produced the effects described on the continent, may be added the insular position of the United Kingdoms, vulnerable from numberless and distant points, the horse has been considered, in connection with the unconquerable spirit of the nation, as one of the most efficient means of repelling invasion. A circumstance that would of itself be sufficient to account for the *overweaning* attachment to this animal. But identified, as his services have been for a long period, with the convenience, sports, and recreations of all ranks and classes, and the science of *breeding* and *training* forming a characteristic feature, it could not excite surprise, if the approach of that terrible spectre, *famine*, should produce little or no effect in the reduction of the number. And although some of the most distinguished characters in the nation, eminent for their practical knowledge in rural economy, have been for half a century advocating the substitution of the ox for the purposes of agriculture, and demonstrating the feasibility, economy, and vast saving of food, yet it is said the number of labouring oxen have lately diminished and horses increased. FIVE MILLIONS of the latter are now supposed to subsist in the United Kingdom, and two-thirds employed in husbandry,—consuming, at a moderate estimate, the product of *twenty millions* of highly cultivated acres! And what is the consequence? *consumption*, follows so close upon *supply*, that at every season of *harvest, let the preceding one be never so abundant*, fast sailing vessels are found in the various ports, with their anchors *atrip*, to convey intelligence of the *result* to all parts of the world where a surplus of bread corn is grown,—exciting such an interest in our own country, that the *farmer* on the shores of *Erie* and *Ontario*, and on the banks of the Ohio, may be seen reading *bulletins* of *British weather*—the *rain* and *sunshine* of every day in *August* and the *two* following months—often within thirty days after the time of their publication in London or Liverpool. Can it be supposed that in a country, where an attachment to the horse borders so nearly upon *infatuation*, that the question of the utility of the *mule* as a substitute, would be seriously agitated, or engage scarce a momentary investigation?

In no country is the mule better adapted to all the purposes of husbandry, for which the horse is used, than in every section of our own. And it would be highly desirable to be able to exhibit a calculation of the actual saving, *in dollars and cents*, by his employment; but, unfortunately, no correct data can be had. And as I consider such calculations, unless founded upon experimental facts, *and those multiplied*, to be as "tinkling cymbals," I shall merely submit a *desultory* comparison between the *mule* and the *horse*, derived from such facts as my own experience, and information from authentic sources, will justify the assumption of.

From what has been stated respecting the longevity of the mule, I think it may be fairly assumed, that he does not deteriorate more rapidly after *twenty* years of age than the horse after *ten*, allowing the same extent of work and similar treatment to each. The contrast in the mule's freedom from malady or disease, compared with the horse, is not less striking. Arthur Young, during his tour in Ireland, was informed that a gentleman had lost several fine mules by feeding them on wheat straw *cut*. And I have been informed that a *mule dealer*, in the western part of New York, attributed the loss of a number of young mules, in a severe winter, when his hay was exhausted, to feeding them exclusively on *cut* straw and *Indian corn* meal. In no other instance have I ever heard or known of a mule being attacked with any disorder or complaint, except two or three cases of inflammation of the *intestines*, caused by gross neglect in permitting them to remain exposed to cold and wet, when in a high state of perspiration after severe labour, and drinking to excess of cold water. From his light frame and more cautious movements, the mule is less subject to casualties than the horse. Indeed, it is not improbable, but a farmer may work the same team of mules above *twenty years*, and never be presented with a *farrier's* bill, or find it necessary to exercise the art himself.

Sir John Sinclair, in his "Reports on the Agriculture of Scotland," remarks that "if the whole period of a horse's labour be fifteen years, the first six may be equal in value to that of the remaining nine; therefore a horse of ten years old, after working six years, may be worth half his original value." He estimates the annual decline of a horse to be equal to fifty per cent on his price every six years, and supposes one out of twenty-five that are regularly employed in agriculture, to die every year: constituting a charge of four per cent. per annum for insurance against diseases and accidents. He considers five acres of land, of medium quality, necessary for the maintenance of each horse, and the annual expense, including harness, shoeing, farriery, insurance and decline in value, allowing him to cost $200, to exceed that sum about *five per cent*, which is the only difference between the estimate of this illustrious and accurate agriculturist, and that of a respectable committee of the *Farmers' Society of Barnwell district*, South Carolina, who, in a report published in the Charleston Courier, of 23d of February last, state, that "the annual expense of keeping a horse is equal to his value!" The same committee also state, that "at four years old a horse will seldom sell for more than the expense of rearing him." That "the superiority of the *mule* over the horse, had long been appreciated by some of their most judicious planters; that two mules could be raised at less expense than one horse; that a mule is fit for service at an earlier age, if of sufficient size—will perform as much labour, and if attended to when first put to work, his gait and habits may be formed to suit the taste of the owner." This report may be considered a most valuable document, emanating, as it does, from enlightened *practical* farmers and planters, in a section of our country where we may suppose a horse can be maintained *cheaper* than in *Maryland* or any state farther north.

I am convinced that the small breed of mules will consume less in proportion to the labour they are capable of performing, than the large race, but I shall confine the comparison to the latter—those that stand from fourteen and a half to rising of fifteen hands, and equal to any labour that a horse is usually put to. From repeated experiments, in the course of two winters, I found that *three mules* of this description, that were constantly at work, consumed about the same quantity of *hay*, and only one-fourth the *provender* that was given to *two* middling sized *coach horses* moderately worked. And from many years attentive observation, I am led to believe that a *large sized* mule will not require more than from *three fifths* to *two-thirds* the food, to keep him in good order, that will be necessary for a horse performing the same extent of labour. Although a mule will work and endure on such mean and hard fare, that a horse would soon give out upon, he has an equal relish for that which is good; and it is strict economy to indulge him, for no animal will pay better for *extra keep* by *extra work*. But if by hard fare, or hard work, he is reduced to a *skeleton*, two or three weeks rest and good keeping will put him in flesh and high condition for labour. I have witnessed several such examples with subjects twenty years old, so much cannot be said of a *horse* at half that age. The expense of shoeing a mule, the year round, does not amount to more than *one-third* that of a horse, his hoofs being harder, more horny, and so slow in their growth, the shoes require no removal, and hold on till worn out; and the wear, from the lightness of the animal, is much less.

In answer to the charge generally prevalent against the mule, that he is "*vicious, stubborn* and *slow*," I can assert, that out of about twenty that have been employed on my estate at different periods during a course of *thirty years*, and those picked up chiefly on account of their *size* and *spirit*, wherever they could be found, *one* only had any vicious propensities, and those might have been subdued by proper management when young. I have always found them *truer pullers* and *quicker travellers*, with a load, than horses. Their vision and hearing is much more accurate. I have used them in my *family carriage*, in a gig, and under the *saddle*; and have never known one to start or run from

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she continues her kind indulgence, and when life is over, she piously hides his remains in her bosom."

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any object or noise; a fault in the horse that continually causes the maiming and death of numbers of human beings. The mule is more steady in his draught, and less likely to waste his strength than the horse: hence more suitable to work with *oxen;* and as he walks faster, will habituate them to a quicker gait. But for none of the purposes of agriculture does his superiority appear more conspicuous than ploughing among crops; his feet being smaller and follow each other so much more in a line, that he seldom treads down the ridges or crops. The facility of instructing him to obey *implicitly* the voice of his driver or the ploughman, is astonishing. The best ploughed tillage land I ever saw, I have had performed by two mules *tandem,* without lines or driver.

There is one plausible objection often urged against the mule, that "on *deep soils* and *deep roads,* his feet being so much smaller than those of the horse, sink farther in;" but it should be considered that he can extricate them with as much greater facility.

Few can be ignorant of the capacity of the mule to endure labour in a temperature of *heat* that would be destructive to the horse, who have any knowledge of the preference for him *merely on that account,* in the West Indies, and in the Southern states.

It is full time to bring our comparison to a close; which I shall do by assuming the position, that the *farmer,* who substitutes *mules* for *horses,* will have this portion of his animal labour performed, with the expense of *one spire of grass* instead of *two;* which may be equal, so far, to making "two spires grow where one grew before." For although a large sized mule will consume somewhat more than half the food necessary for a horse, as has been observed, yet if we take into the account the saving in expense of *shoeing, farriery,* and *insurance* against *diseases* and *accidents,* we may safely affirm, that a clear saving of *one half* can be fully substantiated. But in addition to this, the *mule* farmer may calculate, with tolerable certainty, upon the continuation of his *capital* for *thirty years;* whereas the *horse* farmer, at the expiration of *fifteen years,* must look to his *crops,* to his *acres,* or a *Bank,* for the renewal of his—or, perhaps, what is worse, he must commence *horse-jockey* at an early period.

The intense interest with which the public mind is at present occupied on the subject of canals now in operation and progress, encourages me to offer the *mule* as an important *auxiliary* in the economy of their management; as, I trust, it will not be denied, that on the *cheapness* of transportation on them, depends their *utility* as well as *profit* to the stockholders. The mule seems so peculiarly adapted for the labour on canals, that compared with the horse, he may be considered almost equal to a *locomotive power engine.* Among the advantages we have enumerated respecting his use in husbandry, the most of which are applicable to canal labour, that of the much greater security from *diseases* and *casualties,* which must necessarily require a great number of supernumerary *horses,* to prevent interruption in the line of passage, is not the least important; nor is the very trifling expense at which the mule can be supported during the winter months, as he will bear being taken off his *feed* till the boats are about to be launched in the spring, and in a few days can be made fit for efficient duty—while a *horse* will require at least *half* feed *if he does nothing,* or must be *fed high* for some time before he can resume the labour that will be demanded of him. The same advantages may be derived by his employment on *railways.*

In a communication, published in the *Utica Observer,* the 16th of May, inst., by Henry Seymour, Esq., one of the *canal commissioners* of New York, it is stated that a *packet-boat* on the Erie canal, requires a team of *three* horses to tow sixteen miles—going eighty miles in the twenty-four hours, including stoppages and detention at locks; the *relays* demanding fifteen horses for each *nautical* day. If it takes five days for a boat to be towed from Lake Erie to the Hudson, *seventy-five* horses will be required. I am not certain but it may be done in a little less time, but as there must always be supernumeraries kept, we shall be within bounds to estimate that number. In the same communication, the expense of each horse is estimated at *fifty cents* per day, I presume for subsistence *only,* without reference to *interest* or deterioration of *capital,* for the object of the estimate seems merely to show a *comparison* between the *packet-boats* and *freight-boats,* on a question of *profit and loss;* as it is remarked, that "many *contingent* expenses might be added to both." Taking this *data,* it will cost *thirty-five dollars* per day for the *horse* subsistence of a single packet-boat. The *freight-boats* require but *two,* and allowing for the time occupied in taking in and discharging their cargoes, with the other necessary detentions, average *forty miles* per day—which being double the time of the packet-boats, although they may not require the same number of *relays,* the expense cannot materially differ. From these premises we may conclude, that for every *boat* navigating the *grand Erie canal,* there must be expended *three hundred and fifty dollars* for the subsistence of the *horses,* each time they tow her from the Lake to the Hudson and back. Now, if this can be done as effectually by *mules* for one half this sum, and with an extension of *capital free of interest, fifteen years longer* than that vested in *horses,* the aggregate of this immense saving will appear by ascertaining the number of *boats* at the present time on the canal. But this is out of my power; and I should, perhaps, lead the reader *nearer the verge of incredulity,* were I to offer my own prediction what that number *will* be, thirty years hence, the ordinary period of a mule's labour, and which will *then* be some years less than a *single* century since the PRIME MOVER and GUARDIAN of this *stupendous undertaking,* the present Governor of New-York, first saw the light of heaven.

I cannot resist an impulse to exhibit the *mule* in one other point of view. For the movement of *machinery,* the employment of this animal, when judiciously selected, has met with a most decided preference, in comparison with the horse, independent of the *economy* in using him. And if we consider the rapid, and probably progressive increase of *labour-saving* machines, in every department where they can be made subservient to the requirements of society, it is evident that there will be a corresponding demand for *animal* power, as well as for that, *more potent,* derived from the elements; and although the *latter* may *vastly* predominate, yet should the *horse* be employed, and his increase for other purposes continue, as it now does, in the *ratio* of population, the number, at no very distant period, may become as alarming in our own, as it is at present in our *mother country.* And notwithstanding we may feel secure, from the extent of our territory and extreme diversity of *soil* and *climate,* but, above all, from being in possession of *Indian corn,*—the GOLDEN FLEECE found by our "*pilgrim fathers,*" when they first landed on these shores; yet such peculiar advantages may not insure us against the visitations of one of the most distressing calamities that a feeling community can possibly be subjected to.

Brighton, Mass., May 27, 1825.

INQUIRIES,

By a New York Correspondent.

What quantity of neat Sea Island cotton is yielded per 100 lbs. in the seed?

How much per acre does it produce?

At what distance is it planted, and is more than one tree left in each hole?

Is there more difficulty in ginning this (Sea Island,) than the other kinds?

What kind of gins are used, and could a model of one of the most approved kinds be obtained?

The above queries are from a gentleman in the West Indies, and are referred by me to the fountain of agricultural truth, the office of the American Farmer. W. T., Jr.

[The Editor will gladly receive and publish the answers which may be furnished by the politeness of any of his correspondents, to the above queries—some may have been anticipated in the last number by a Cotton Planter, from whom we have received a reply to Mr. Smith's inquiry about the contrivances for, and modes of *packing cotton.* As it was accompanied with a drawing, which it was necessary to have *engraved,* it could not be got ready for this paper, but will appear in our next.]

AGRICULTURAL REMARKS,

Made by Robert Sinclair, of Baltimore, on a tour through part of Maryland, Pennsylvania and New York—addressed to the Editor of the American Farmer.

(Concluded from page 163.)

On my arrival in Philadelphia, I visited several botanical gardens in the vicinity of that city, the owners of them are engaged in raising trees, flowers, seeds and plants for sale, by which means the neighbourhood, as well as foreign countries, are supplied and benefited. They keep a very extensive collection of rare exotic and other flowers, trees, and plants, and preserve them through the winter by means of green or hot houses; also plants of the most useful forest trees, collected from our own and foreign countries, many of which are cultivated for the British market. In those gardens we have an opportunity of seeing and admiring the various and wonderful works of nature, displayed in plants with their endless varieties. The proprietors' names are David C. Landieth, M. McMayhon, William Carr, and Alexander Parker, all of whom are worthy of a visit from a travelling enquirer. I next visited the market gardens, south of the city, on what is called the neck, from whence the city is principally supplied with cabbages, onions, potatoes and turnips. it is generally divided into lots of ten acres each, on which is erected an house and stable well suited for a gardener's purpose, which he mostly owns, and from it he makes as comfortable a living as some farmers do on two hundred acres. This land is naturally a rich stiff clay loam, capable of receiving large quantities of manure without injuring the crops, and as those gardens are only distant from the city from one to two miles, they can obtain as much of that article as they please. Their vegetable ground is laid out in long beds, and kept clear of shrubs, consequently convenient to till with the plough. The following is their method of raising their onion and cabbage crop, viz.; the land is manured and ploughed in the early part of winter, and left rough until the first dry weather, in the spring; they then plough and harrow until the ground is fine, and spread a thin coat of ashes over it, then strain a line across the whole plat of ground, and set in small onions of the last years raising from seed, along the line at three inches distant, then move the line nine inches and plant as before, then move the line a second time and plant as before directed, again move the line eighteen inches, and commence a second bed or plat; and so on until the crop is planted, in plats containing three rows, distant from the next plat eighteen inches, in the centre of which and between the plats of onions, about the first of sixth month, [June] they plant the cabbage crop, leaving the rows three feet apart, which are cultivated as soon as the onion crop is removed. The rich preparations necessary for the onions, produces a great crop of cabbages. One of the principal gardeners informed me that he had as its common produce, four thousand bunches of onions per acre, and four thousand eight hundred heads of cabbage off the same ground—price in market ten cents per bunch for onions, and three cents per head for cabbage.

4000 bunches of onions, per acre, say 6¼ cents - - - - - - - -	$250 00
4800 heads of cabbage on the same acre, say - - - - - - - - - - -	100 00
300 bushels of potatoes, per acre, 50 cts.	150 00
Turnips, after the potatoes, 400 bushels per acre, at 25 cents - - - -	100 00
	$600 00

The labour in raising these crops must be considerable; yet as most of it may be performed by women and children, the profit must be great. Every gardener has at least from one to three acres of onions, and the same of early potatoes and turnips, by this means they get two crops per annum, off their ground. After *lettuce, radishes, rape and early corn, they plant, cabbage, turnips,* &c. also; but nothing attracted my attention more than an acre of strawberries, which the gardener showed me full ripe, the 13th of 6th month, [June] from which he said he had pulled and sold the day before, 300 quarts, and expected to pull the same quantity per day, for some time; which I had no doubt of, for I thought a person from any one station in the patch, might pull half a bushel, without moving further than he could reach. They having had the best possible cultivation were large, and full of rich vinous juice. They were cultivated on rounding beds, about four feet wide, with walks between, the plants set about one foot apart; the beds were kept quite clean of grass, and manured with long straw manure in the winter, which protected the plants from the severity of the frost, whilst it was imparting fertility to the soil, and kept the vines off the ground and grit. I visited Edward H. Bonsal, in Germantown, who is a very ingenious and intelligent agriculturist, and has been for several years cultivating the currant bush, and had succeeded in that and making wine from the berries of the same, the best of any person I have become acquainted with; his method of cultivating the currant bush is as follows:—He takes the young shoots of last year's growth, cuts them ten or twelve inches long, and cuts out all the eyes or the end to be planted, as far as the ground is to cover them, and plants them in mellow rich moist ground, in a nursery, they are better by being shaded from the south-west sun; here they must be kept clean the first season, and the next fall or spring be planted where they are to stand after the ground is prepared by deep ploughing, manuring, and harrowing; then set down the garden line across the ground to be planted, and set in the plants along the line at two and a half feet distant, then move the line five feet, which will give sufficient room to cultivate them with the plough, and by removing the eyes as above directed, will effectually prevent suckers from rising from the roots of the plants, and causes them to grow a handsome tree. I tasted some of his currant wine, which was a part of thirty barrels he had made; it was superior to any I have ever tasted of the kind, being entirely clear of that sweet rich taste, so common to home made wine, and partaking of that dryness so much admired in the best Lisbon and Madeira. He being a chemist gives him an advantage over our worthy house wives in manufacturing wines; his success has so far encouraged him in the making of this article as to induce him to plant two or three acres of grape cuttings for the purpose of making wine, and supplying the market with so delicious a fruit

I stopped at Burlington to see Daniel Smith's nursery, which contained the most extensive assortment of fruit trees I have seen, and appeared to be carefully and well managed. On my arrival at New York I visited William Prince's nursery, or rather botanic garden, but not meeting him or his partner, I obtained but little information. I experienced considerable pleasure from a short visit to some of my correspondents and friends in Connecticut, from whom I have for some time obtained a part of my garden seeds, whom, at this season of the year, I was desirous of seeing in the act of raising—with their care and correctness I was perfectly satisfied.

On returning to New York, I took the steamboat for Albany, and from thence by stage to Schenectady, where I took passage in one of the canal packet boats for Utica, in which I travelled eighty miles in twenty-four hours, a very pleasant passage, where I could read, write, or sleep without interruption. The accommodations were excellent—passage and board three and a half dollars, for the above distance. These boats are seventy-six feet long and fourteen wide, as neatly furnished as our steamboats. There are other boats of the same size, plainly and substantially finished for carrying produce and passengers; the passage is one cent per mile, with the privilege of cooking their own provisions, which is a great convenience to families who are moving westward. The canal is three hundred and forty miles long, has one hundred and fifty locks, each of which cost ten thousand dollars, in all one and a half millions for cost of the locks only. Notwithstanding the immense cost of the whole work, the receipt of tolls, last year, was so great as to pay the interest on the first cost of the canal, and leave a surplus of three hundred and eighty thousand dollars, which will increase very much when the next five miles to lake Erie are finished, which will be done this fall; and as this canal has been cut through a level country compared to any we may have to cut, to give us (to the south,) a communication with the western waters, it will be advisable for those who are or may be appointed as commissioners, to ascertain the practicability of those great works by estimating the number of locks on the whole line of any canal to be cut, as the amount of expenditures and detention of transporting produce, depends very much on their number, and consequently the utility of the canal; for the mere digging of it where there are no locks is comparatively trifling;—it takes from five to six minutes for a boat to pass each lock This canal, and the salt works not long since erected at Salina and Syracuse, add very much to the value of that extensive and fertile country situated between Utica and the great western lakes. These salt works are about one hundred and forty miles west from Albany. The water is so strongly impregnated with salt that it can be chrystalized to considerable profit at 6¼ cents per bushel, and I am told there is no want of water to increase the manufacturing to any extent. The farms and buildings look well in this country, and a spirit of industry and improvement generally prevails. I am a lover of good and neat dwelling houses, but little expected to meet with so many, particularly in this new country. I expected and would have been better pleased to have seen better *barns* and smaller houses, especially when I consider the richness and fruitfulness of the land, requiring barn-room. I was sorry to see in many places but little attention paid to raising cattle and sheep, which I think ought to be very particularly attended to at so great a distance from market, on land so well suited for the purpose; and their breed of cattle evidently has received but little attention, many of which are of an inferior quality. What a great improvement might soon be made by introducing into that part of the country some of the improved Durham short horned breed, which, in my opinion, are well suited to their rich pastures, being of large size, much inclined to fat, and are said to be remarkably fine milkers, from which they might soon export tons of beef, cheese, and butter. These cattle are as yet scarce in this country, but a few very fine ones may be had of John Hare Powel, near Philadelphia, who has at great expense imported some from which he is raising calves. The Devon breed are also very valuable, being a clean made, nimble, hardy, docile stock, suited to any part of our country; but I think them better calculated to stand the heat and short pastures of the southern states, than any cattle among us—a few of which can be obtained at Baltimore. While at Auburn I visited Ira Hopkins, who sent me the white flint wheat, last year, and from whom and his brother Josiah, I have bought five hundred bushels this year for seed. He showed me their field of the same kind, as also many of their neighbours. The best proof I had of its being generally approved of was, in travelling from Auburn to the Skaneateles lake, eight or ten miles, in counting the fields of wheat, ten out of twelve were the white flint wheat. At Albany I called on Judge Jesse Buel, at his estate near the city, where I found that his example and precept are doing much good to the country; his ample means affording him the opportunity of making many very valuable experiments, and importing articles which have been found good in other countries. Among the latter are various kinds of apple scions, and other choice fruits and plants, imported from the president of the Horticultural Society of London, which cannot fail giving celebrity to his extensive nursery.

Wood's cast iron plough is used throughout the most of this county, as also in Dutchess county; and generally between Albany and New York—also many places in Jersey and near Philadelphia. Some of which are made with a steel point, which by changing the side or end of said point, from time to time, as it gets dull, the plough will run a season without any repairing, which I think one of the most valuable improvements I have seen to the plough. I have made arrangements to adopt the same in our manufactory. I think the cast iron plough will go into very general use, as the objection advanced to the cast shear point wearing to a bevil on the lower side, can by this improvement be entirely obviated.

R. SINCLAIR.

8th month, 1st. 1825.

MR. PRINCE'S SEEDS.

A respected correspondent at Harvard, Mass., in a letter to the Editor of the New England Farmer, has the following remarks upon the comparative value of the American and foreign seeds:

"I have made a very fair experiment this year upon some mangel wurtzel seed procured at your office last spring, and raised by John Prince, Esq., of Roxbury, compared with the English, which was from two different sources; the result was altogether in favour of the *American* seed."

[*N. England Farmer.*

AGRICULTURAL PROSPECTS.

Chambersburg, August 9, 1825.

The corn crops are entirely destroyed by the drought, in the fine valley between the Susquehanna mountains. Many fields that a few weeks ago promised forty bushels per acre, will not yield three. East of the Susquehanna, and west of the mountains, the weather has been more favourable.

INTERNAL IMPROVEMENT.

INTERNAL IMPROVEMENT OF PENNSYLVANIA.

To the Editor of the American Farmer.

Harrisburg, Aug. 8th, 1825.

Sensible of the deep interest you feel on the subject of internal improvement generally, I presume a brief sketch of the proceedings of the Canal Convention, lately held here, will be acceptable to you, as well as to most of the readers of your valuable paper. At 10 o'clock on the 4th inst. the day fixed for meeting, the members of the convention attended in the Hall of the House of Representatives; it appeared on examining the certificates that every county in the state, (with one exception,) was represented; it was found that 122 members had been chosen, and that 118 were present. Perhaps no better evidence could be offered of the deep interest felt by the citizens of Pennsylvania, than witnessing this collection of the first talents of the state, and the unprecedented punctuality with which the members attended. As soon as the convention was organized, Mr. Sergeant, of Philadelphia, after a very able speech, moved for the appointment of a committee to draft resolutions expressive of the sentiments of the convention. A committee of nine gentlemen, from every quarter of the state, was accordingly appointed; on the following day the committee reported the resolutions, which I send you enclosed. These resolutions passed after some slight amendments; also an additional one, recommending the improvement of our large streams to the attention of our next Legislature. When we take into view the great variety of jarring interest necessary to be reconciled, it surprised every one to find so feeble an opposition. The almost entire union of sentiment and harmony that existed throughout the whole proceedings, was highly gratifying, and is a sure pledge of the happiest results arising from this meeting.

The same committee that drafted the resolutions was appointed to draft an address to the public, which I have no doubt will be a very interesting and valuable document. By the 5th resolution, you will perceive that the most liberal sentiments were entertained towards our sister states. This is as it should be. Let us be emulous, but not envious.

When we consider the unbounded sources of wealth, now quietly resting in the bowels of the mountains of Pennsylvania, for want of a cheap mode of conveyance to a market, we cannot help expressing our regret and astonishment at the lethargy which has unfortunately existed on this all important subject. I would fondly hope "the Lion was not dead, he was only sleeping." Although to some it may, at this time, appear extravagant, I feel by no means backward to make the declaration, that in less than ten years after the completion of the line of communication from east to west, such single line of communication will be inadequate to give vent to four articles of our own production. I mean the flour, the salt, the coal and the iron of Pennsylvania. Several warm advocates for rail roads in preference to canals, attended at Harrisburg.—You will perceive that the convention left that question entirely at rest, until we possess the advantage of fuller investigation and experience.

We had some fine specimens of speaking, but of different kinds. Messrs Sergeant, Ingersoll, Buchanan and Barnsides, invited the attention of a delighted audience. After a session of three days, the convention adjourned *sine die* at a late hour on Saturday night.

I am sir, very sincerely, yours, &c.

———.

P. S. A gentleman took the pains to make the calculation, and found that the distance travelled by the whole delegation, exclusive of many others that attended, amounted to 29,500 miles, making an average distance for each, of 250 miles, in going and returning.

SPORTING OLIO.

GOOD SHOOTING.

Sir, *Elkridge, 11th August*, 1825.

Your subscribers in this neighbourhood are pleased to see that you are willing to yield a column of your journal, where the lovers of rural sports and exercises may record anecdotes and feats of extraordinary performances of men, dogs, horses, &c.—We were surprised to see, at this time of day, the sensitiveness evinced by Mr. —— in a late number, because it had been said that he had been of a party in a shooting match. It seems he is fond of his dog and gun, and likes to go out occasionally with a friend, and shoot in cold blood, but does not like to have it agitated by the excitement of a *match* This fastidiousness would, methinks, have better suited the days of black-letter than the present. All I wonder at is, that this gentleman should, without ever having been engaged in a *match*, have acquired, as he certainly has, amongst gentlemen sportsmen, the reputation of being one of the very first and most companionable shots in Maryland. I have seen some accounts of extraordinary shooting extracted into your paper from English journals; but this you do, probably, not because you suppose there are no cases of equally good shooting in America, but because amongst us, for want of a suitable medium, sporting occurrences are not recorded. I will not now write you an essay on the healthful tendency of rural sports and the invigorating effect of field exercises on mind and body—my present object is merely to ask you to record a few instances of good shooting, which were recently mentioned to me; and if you can find any thing better in your English annals of sporting, please let us have it.

I mention the gentlemen's names without asking their consent, and will abide the consequence of their displeasure at being thus "recorded."

Col. Lloyd and R. West, Esq., the first of Talbot and the second of Prince George's county, met at Annapolis—and taking alternate birds, killed twenty-nine birds at thirty shots—Col. Lloyd missing the thirtieth and last bird, when it was growing quite dark.

B. Ogle, Esq., of Prince George's, has been known to bag twenty-five birds at twenty-five successive shots—and Col. F. Tilghman, of Washington county, has bagged 32 at thirty-three shots.

Master Charles Ridgely, son of Col. C. S. Ridgely, a youth of fourteen, killed, a few days since, 11 snipe at thirteen shots. Can John Bull beat these!

A match has been made, and will be shot after the 15th of next month, between Col. C. S. Ridgely and George Cook, Esq., against Dr. A. Thomas and Charles Dorsey—each one to have his dog and gun, and the parties to choose their own ground.—They will communicate the result, and moreover invite you and other friends of plough and plover to partake of the game.

P. S. I was requested to ask you to invite sportsmen to communicate the result of their peaceful, and cheerful, and healthful contests in fishing, hunting, shooting, running, leaping, walking, &c.

Ploughing and hauling, and reaping and mauling, are all very well in their way—so are hominy and bacon; but who is it that does not give an extra smile of affection and gratitude to the wife who sweetens every meal with a nice little dessert—be it never so little? With most tempers, life is at best but a dull pilgrimage: without varieties to amuse us on the way it would be insupportable—and he is the happiest fellow who is most susceptible of pleasing emotions from the greatest variety of sources—whether they be occasionally with his dog and gun, his horse and hound, his flute and fiddle, or his "friend and pitcher"—provided they take him off not too much from the main business of life, and provided further, that they are not of demoralizing or enervating tendency.

Love, hope, and joy, fair pleasure's smiling train—
Hate, fear, and grief, the family of pain;
These, mixt with art, and to due bounds confin'd,
Make and maintain the balance of the mind—
The lights and shades, whose well accorded strife
Gives all the strength and colour of our life.

FROM THE ANNALS OF SPORTING.

Extraordinary Leap.—On Wednesday, 12th December, a horse belonging to Mr. Mawe, of Loughborough, took a hedge six feet high, which in length exceeds any leap recorded for many years, being from hind feet to hind feet, 11 yards and 24 inches, (35 feet.) carrying a youth 5 stone 12 lb. (82 lb.)

[Can any *trooper* on Elkridge beat that!]

A favourite horse of William Henry Walrond, Esq., of Bradfield House, died on Friday, March 1, at the extreme age of fifty years.

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 19, 1825.

☞The next meeting of the Trustees of the Maryland Agricultural Society, is appointed for Thursday, the 8th of September, at Brookland Wood, the summer residence of Richard Caton, Esq.

The last meeting of the Trustees was held at Mr. George Cook's, on Elkridge—when James Carroll, jr. and H. V. Somerville, Esqrs., were appointed, with power to call in a third, to designate a committee of three in each county—to whom application may be made by those who propose to compete for the premiums offered for the best cultivated farms. It is expected that those gentlemen will promptly perform the duty assigned them, and that the judges to be so appointed will be announced in a few days.

At the above meeting the qualities and value of the white flint wheat had been better tested, and were more fully discussed, than at the meeting at Waverly. The Trustees had most of them procured last year, of the wheat brought to this market from Albany, by Mr. Sinclair, a sufficient quantity to make a fair experiment; and the opinion was, that it has no capacity to resist the Hessian fly more than other wheats already known, and that it does not yield so well as some. Mr. Jacob Hollingsworth, and others, sowed it at the same time with the blue stem and other wheats, and found them equally injured by the fly. In short, it was the decided opinion at the Board, that it does not possess any of the peculiarly valuable characteristicks and advantages over other wheat, which have been ascribed to it; and this opinion and declaration of experience we were requested to announce for the consideration of the farming community.

The extraordinary properties which had been ascribed to this grain, created for it last year an extensive demand, to satisfy which Mr. Sinclair, the enterprising agricultural machinist, was induced to purchase largely, and, as we believe, without then realizing any adequate profit. The wheat was recommended not by him, but by others; and the agriculturists of this and neighbouring states felt indebted to him for affording them the opportunity of testing it. Experiments which have been made on other soils may have resulted differently, and we shall be glad to still publish any additional observations that may be offered. Mr. Sinclair has personally found it to be the favourite wheat in the state of New York, as appears by his remarks in this number. One thing is to be taken into consideration, in estimating all new things with which trials are made by farmers. If they buy a quantity of any new article at a high price, they naturally endeavour to make the *most of it*, by extraordinary attention and care in manuring, pulverizing and otherwise preparing well the soil to receive it; and then the more than common yield is apt to be ascribed to some valuable quality inherent in the article itself. These small patches are, in fact, managed with just that degree of care and labour that ought to be bestowed *in every case;* and were that done, farmers would find most *old* things good enough.

"*Diligence,*" says Poor Richard, "is the mother of good luck, and God gives all things to *industry.*"

COMMUNICATED.

Meetings of the Trustees of the Maryland Agricultural Society.

Permit an invited guest at the two last, to state, that these meetings continue to be held with punctuality, and with increasing pleasure and benefit. The weather, however, has been so hot at the time of those held at Waverly and at Hazlewood, that none of us had courage to go abroad in search of defective management, and every one knows that the best is nearest the house. The most zealous could not venture, with the mercury standing above ninety, beyond the shade of the noble elms, willows, and pacane nuts that embower these hospitable mansions. There was no spirit left us for any thing but for *discussion;* in the freedom of which various topicks were presented and urged in various lights, according to the ingenuity, the experience, or, shall I say, the prejudices of the combatants. White flint wheat, the hessian fly, long, short, and *no*-horn cattle—the sheep of all wools, and vines of all climes and countries, were severally passed in review.

One gentleman argued "like a book," that for land or pocket, there was now nothing like sheep; in sheep husbandry, we should find the true antidote to hard times—the real philosopher's stone, that could transmute all ores and minerals into gold, even the abandoned wastes that degrade the vicinity of this large city, might be peopled with flocks and herds: so animated and impressive was his manner—so happily did he give to his conceptions the air and the garb of reality, that you might almost fancy that you saw a flock moving like a "cloud cap" on the summit of every neighbouring hill; in every shade a sheep shearing.

> "How meek! how patient! the mild creature lies!
> What softness in its melancholy face,
> What dumb complaining innocence appears!"

To the advocate of sheep husbandry, another practical farmer replied, that his notions were altogether English, and that they could only be verified in the salt air and humid atmosphere of that, or some other sea-girt isle; that in this country, we are already destined to have all sun and no *turnips*, and these evils would increase with the clearing of our lands; that, in short, the gentleman's flocks of sheep could be supported on but two things—turnips —or *paper;* and as for home-made wine, and our knowledge, resources, and capacity for self-supply, whether from grapes or gooseberries, persimmons or *parsnips*, it was fit for any thing but—to drink; and in offering his opponent a glass of old L. P. he moved to postpone *that* subject until the next meeting—when he would be ready to meet the gentleman on, *his own grounds.* The motion was carried, and the meeting adjourned.

COMPLIMENT TO THE WRITERS FOR THE AMERICAN FARMER.

[Extract of a letter from W. M'Clure, Esq. of Philadelphia, a gentleman well known amongst scientific men for his liberal attainments and munificent use of an ample fortune in promoting the useful arts and useful institutions. He has recently returned from France, where he purchased the copper plates, and the whole edition of Michaux's North American Sylva, to be distributed amongst American Societies, instituted for benevolent and useful purposes. A copy of this splendid work has been presented by him through Mr. Skinner, the corresponding secretary, to the Maryland Agricultural Society, as well as a copy of Mr. M'Clure's own observations on the Geology of the United States of America, with some remarks on the effect produced on the nature and fertility of soils, by the decomposition of the different classes of rocks, and an application to the fertility of every state, in reference to the accompanying geological map, with two plates, Philadelphia, 1817.]

Philadelphia, Aug. 6th 1825.

"Count Lasteyrie, a distant relation and friend of Gen. la Fayette, publishes a monthly Journal of 3 sheets, in imitation of the cheap 3 sheets, published in Britain, containing all the useful and practical knowledge he can collect, which he wishes to exchange against your excellent work, the American Farmer, which is very *much esteemed, and often quoted in Europe.* Count Lasteyrie's Journal began this year, and if you incline to exchange, I can send you the two first numbers, and he will regularly forward the others as they are published, on receiving the address of your agent at New York, where all the Havre packets enter. I had the pleasure of perusing your four first volumes in Spain, and have since arriving here got the 5th and 6th Vols. which gave me much pleasure to see the immense improvement in our agriculture, which is the only solid foundation of all civilization, arts, and perhaps real happiness of mankind, and remain

Yours sincerely,

Mr. J. S. Skinner. WM. M'CLURE.

[The American Farmer has also been sought for and obtained in exchange for several periodical works in England, and for the "Bulletin Universal des Sciences," edited by the celebrated philosopher Ferrussac, in which are now found very numerous extracts from the American Farmer.

For all this, the Editor is exclusively indebted to the honourable zeal and intelligence of his numerous correspondents.]

Broad-tail Sheep.—There are some fine lambs of this race of sheep, crossed with the full-blood merino, in the care of Mr. Frame, at the Maryland tavern, on the Frederick road. They are by a broad-tailed imported Tunisian ram, of excellent fleece.

We were once informed by victuallers in the Philadelphia market, that from the broad-tail stock their market had derived its supply of the *best lamb and mutton.* These sheep, at Mr. Frame's, were brought across the bay at considerable expense, and may now be had for three dollars per head, to save them from the knife. Inquiry can be made of Mr. Frame. If not sold within one week, they will be sold to the butcher!

Tobacco.—Amount of Inspections in the three state warehouses for the last week, 228 hhds.

Erratum.—In page 150, vol. 7, first column, fifth line, for 151 revolutions, *read* fifteen revolutions, &c.

CONTENTS OF THIS NUMBER.

Prize Essay, a Dissertation on the Mule, with a view of promoting an Improvement in the breed, and of demonstrating the utility of employing him as a substitute for the Horse, in the labours of husbandry, canals, &c., by Sam'l Wyllys Pomeroy—Agricultural Remarks, made by R. Sinclair, on a tour through part of the adjoining states, concluded—Mr Prince's Seeds—Inquiries respecting the culture of Sea Island Cotton—Agricultural Prospects—Internal Improvement of Pennsylvania—Good Shooting—Extraordinary Leap—Meeting of Trustees of the Agricultural Society of Maryland, and their opinion of White Flint Wheat—Communication—Compliment to the writers for the American Farmer—Broad-tail Sheep—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	WHOLESALE. to	RETAIL. from	RETAIL. to
BEEF, Baltimore Prime,	bbl.	9 50		10	
BACON, and Hams, . .	lb.	7		11	
COFFEE, W.I. Green, .	—	17½	18	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	25		
Georgia Upland, . . .	—	20	22		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	11	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	35	36		
FISH, Herrings, Sus.	bbl.	2 18		2 25	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 75	5 00		
Fine, ...	—	4 12			
Susquehanna, superfi.	—	4 38			
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	42	45		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	60	90		
do. Red, ...	—	65	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	42	43		
Barley, ...	—	50			
Clover Seed, Red . .	—	3 75		4	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	200			
HOGS' LARD, ...	lb.	8	9		dull
LEATHER. Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, Havana, .	gal.	24	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	6½	7	7½	8
NAVAL STORES, Tar,	bbl.	2 25	2 50		
Pitch, ...	—	1 75			
Turpentine, Soft, . .	—	2			
OIL, Whale, common, .	gal.	24	26		
Linseed, ...	—	80			
PORK, Baltimore Mess,	bbl	15	15 50		
do. Prime, . . .	—	11 50			
PLASTER, cargo price,	ton.	4 00	4 25		
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 25	3 75		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	26			
PEACH BRANDY, 4th pr	—		82	1	
APPLE BRANDY, 1st pr	—	40			
SUGARS, Havana White,	c.lb.	13 00	14 00		
do. Brown, . .	—	10 50	11 50		
Louisiana, ...	—	8 50	11 00		
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	75			
Ginger, Ground, . . .	—	7	8		
Nutmegs, ...	—	2 00		2 25	
Pepper, ...	—	19		25	
SALT, St. Ubes, ...	bush	40			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	9 25		10	
WINES, Madeira, L. P.	gal.	2 50	2 70	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	4	3		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	20	30		
Skinners' or Pulled, .	—	33	37		

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EDUCATION.

WEST POINT ACADEMY.

[We have already gone so far in giving an account of this, our only national school, that were we now to stop, we should not only forfeit our promise to complete the sketch, but leave the part of it which has been already given, in a state much less intelligible and useful than it may be by presenting the sequel, as we now do; that the whole may be embraced in one connected view, by all those who feel the importance of every thing connected with the intellectual improvement of rising generations. As we have before intimated, we should not have attached to this subject so much consequence, if we had regarded it merely as a *military* institution. calculated to advance only the science of killing the greatest number of our fellow beings in the shortest time, with the least danger to ourselves—in fewer words, the science of *war*. If *this*, we repeat, had been our only object, we could not have reconciled it to the leading designs of this journal. But in the admirable regulations for the government of that academy, there may be found many ideas of instruction, and principles of discipline. applicable, with great effect and benefit, to other seminaries of learning. Not hearing from any quarter, any intimation that what we have occasionally published regarding the great subject of education, was out of place and unacceptable, we felicitate ourselves with the conclusion that our subscribers do not reproach us for having misapplied those columns of the American Farmer which have been appropriated to that topic. Should we have no reason to doubt the truth of our persuasion, in this respect, we shall, before long, endeavour to give a prospectus of a school, which promises to be not inferior to the best *of any country*, in securing to its pupils the cardinal blessings of all well conducted seminaries of learning—to wit: a well founded character for moral rectitude, and the inestimable advantages of intellectual power. We mean the Institution which has been established at the beautiful town of Northampton, in Massachusetts, by Mr. Joseph G. Cogswell and Mr. Geo. Bancroft.]

Regulations for the government of the Military Academy at West Point.

(Concluded from p. 138, American Farmer.)

Practical Military Instruction.

This will embrace, 1st, a course of *Infantry Instruction*, viz: The system of infantry tactics established for the army of the United States, commencing with the elementary drill of the soldier, and including the school of the company; school of the battalion, and evolutions of the line—the exercise and manœuvres of light infantry and riflemen; the duties in camp and garrison, of privates, non-commissioned officers, and officers, including those of guard and police. 2d. A course of *Artillery Instruction*, viz: Nomenclature of the different parts of cannon, gun carriages, caissons, and their implements; exercise and manœuvres of field artillery—exercise of siege artillery, including the mortar and howitzer exercises—mechanical manœuvres—target practice with the gun, howitzer, and mortar; duties of the laboratory. 3d. *Sword Exercise*, including the exercise of the broad sword, and the cut and thrust, or small sword.

To complete the preceding course of studies will require four years. The branches to be pursued, and the course to be completed in each, exclusive of the practical military instruction, are as follows:

1st year. The French language and part of the mathematical course, viz: algebra, geometry, plane trigonometry, application of algebra to geometry, mensuration of planes and solids.

2d year. Continuation of the French language—the first part of the course of drawing, and the remainder of the course of mathematics.

3d. year. The second part of the course of drawing—mechanics;—experimental philosophy—astronomy, and the first part of the course of chemistry.

4th year. Geography, history and ethics—engineering and the science of war—the remainder of the course of chemistry, and mineralogy.

Should it be found by experience, that too great a portion of study or instruction is assigned in the preceding course to any particular year, the academic board shall, if they see fit, transfer from the course of one year to that of another, such particular portions of study or instruction as may appear necessary to produce an equality; which transfer shall be reported to the secretary of war.

The annual term allotted to the class studies will be ten months, commencing on the 1st September, and ending on the 1st July following.

The order of study and instruction in the several branches of each department, and the time to be employed on each, shall be determined by the academic board; in doing which they will be guided by experience, and a just regard to the objects of the institution.

The daily allowance of time for the class studies will be not less than nine, nor more than ten hours.

The portion of military instruction in each year will be as follows:

1st year. School of the soldier—guard and police duties of privates.

2d year. School of the company—duties of corporals.

3d year. School of the battalion—duties of sergeants; exercise and manœuvres of artillery pieces.

4th year. Evolutions of the line; duties of orderly sergeants and commissioned officers, (including those of the battalion staff,) and of officers of the day; remainder of the instruction in artillery; the sword exercise.

Practical military instruction throughout the year. Field exercises only will be limited between 1st April and 1st November following.

There will be an encampment of the cadets annually, commencing on the 1st July, and ending on the 31st August ensuing, during which the instruction will be exclusively military.

Classification.

The cadets shall be arranged in four distinct annual classes, corresponding with the four years of study. The cadets employed on the first year's course to constitute the 4th class; those on the second year's course, the 3d class; those on the third year's course, the 2d class; and those on the fourth year's course, the 1st class.

The classes shall be considered as taking their commencement on the 1st July annually, when the result of the examination held in the preceding month shall be announced; and at no other time shall a cadet be advanced or transferred from one class to another, unless prevented by sickness, or authorized absence, from attending at the aforesaid examination, in which case a special examination shall be granted him; but in no case shall a cadet be passed from one class to another, without a previous examination by the academic board.

Examinations.

An annual examination of the classes, preparatory to their advancement, will commence on the first Monday in June, at which time the cadets shall be examined, by the academic board, in all the branches of study and instruction through which they have passed, in presence of the board of visiters, and such other literary and scientific gentlemen as may be invited to attend.

Any cadet found deficient at the annual examination in the studies of his class, shall not be advanced to the next higher class; and if, in the opinion of the academic board, his deficiency is to be attributed to incapacity or want of application, his case shall be represented to the secretary of war, to the end that he may be discharged.

A semi-annual examination shall be held by the academic board, commencing on the first Monday in January.

After each semi-annual examination, the academic board shall report to the secretary of war the names of all such cadets of the 4th class as have not made due proficiency in their studies, or whose general conduct has not been satisfactory, and whom they may deem it advisable to discharge; noting particularly the moral and military conduct, the habits in regard to study, and the intellectual capacity of each.

In all cases of examination for admission to the military academy, or for the regular passing from one class to another, at the annual examinations, or for appointments in the army, the academic board will, in their report of such examinations. set forth opposite the name of each cadet who shall have failed to pass satisfactorily his examination, the reason of his failure, and the particular studies in which he was found deficient; and forward the said report, as early as practicable, to the inspector of the military academy, for the information of the war department, accompanied with such remarks and explanations as may be applicable to each particular case.

Merit-Rolls.

The internal organization of the respective classes shall be strictly according to the principles of merit: to which end the academic board, at the examinations in January and June, annually, shall carefully determine the relative merit of the cadets in each class, and in each particular branch of the studies of that class; and shall form a roll of the same, by a comparison of the particular rolls thus formed, and by attending to the relative weight and importance of the several branches, the board shall determine, at the examination in June, an order of general or aggregate merit, in each class, according to which the cadets of the class shall be arranged and enrolled from first to last.

The relative importance of the studies in each particular class (excepting the 1st,) in forming the general merit-roll of that class, shall be specifically determined by the academic board,* in forming the final merit-roll of the 1st class, however, the different subjects of the course, and the conduct of the cadets, shall have weight, as follows:—*Conduct* 3; *Engineering and the Science of War* 3; *Mathematics* 3; *Natural Philosophy* 3; *Practical Military Instruction* 2; *Chemistry and Mineralogy* 2; *Geography, History, and Ethics* 2; *French* 1; *Drawing* 1.

The superintendent will annually, in the month of November, report to the war department, for publication in the Army Register, the names of such cadets as have most distinguished themselves in the examinations, not exceeding five in each class, and specifying the studies in which they particularly excel.

Besides the merit-rolls prescribed, the superintendent of the Military Academy will cause to be made out annually, on the 1st of February and 1st of July, a roll containing the name of each cadet arranged alphabetically, under the proper head of each state, territory, and the District of Columbia; exhibiting the number from each state, territory, and the District of Columbia; the name and address of the parent or guardian; the town, county, or district from which appointed; date of admission; age when admitted; present age, (at the date of the roll,) and class to which he belongs. The place from which a cadet is appointed is to be considered as his place of residence, and will not be altered unless directions to that effect be given by the war department. Care must be taken that the names of the cadets are correctly given, and inscribed at length on the rolls.

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* The academic board have determined that, in forming the general merit-rolls of the 2d, 3d, and 4th classes, the subjects of each course shall have weight as follows:
2d class.—*Philosophy* 3; *Chemistry* 1; *Drawing* 1.
3d class.—*Mathematics* 3; *French* 1; *Drawing* ½.
4th class.—*Mathematics* 2; *French Language* 1

Instruction.

For instruction in mathematics, the 3d and 4th classes shall be separately divided into convenient sections, which sections shall be counted off from the mathematical merit-roll of each class respectively, in such manner that the 1st section shall consist of the first cadets on that roll; the 2d of those next in order, and so on. The 1st section, thus formed, shall be under the immediate tuition of the professor, and each of the others, of an assistant professor of mathematics.

The instruction in each particular branch of the course of mathematics will be proportioned to the capacity of the different sections; the more profound and difficult investigations of the course, generally, being reserved for the higher sections.

For instruction in the French language, the two lower classes will be divided into sections, according to the French merit-roll, in like manner as in mathematics, each section to consist of not more than twenty pupils. The sections of the 3d class will be instructed one hour every other day, and those of the 4th class one hour daily. The teacher of drawing will daily give instruction to the 2d and 3d classes in the elements of drawing.

For instruction in natural philosophy, the 2d class will be divided into convenient sections at the commencement of that class, according to the roll of mathematical merit; the first section so formed to be under the immediate instruction of the professor, and each of the others, of an assistant professor. The instruction in natural philosophy, as in mathematics, will be proportioned to the capacity of the different sections.

The 1st class for instruction in engineering will be divided according to the roll of general merit into sections, the first of which to be under the immediate tuition of the professors, and each of the others, of an assistant professor. The instruction of each will be proportioned to its capacity, and the principles of engineering shall, as far as practicable, be demonstrated by actual operations on the ground.

The professors of mathematics, natural philosophy, and engineering, in order to ascertain the proficiency of the sections entrusted immediately to their assistants, and the manner in which their duty has been performed, shall occasionally, and in rotation, when there are more than two sections, instruct the sections entrusted to the assistants, the periods for which will be fixed by the academic board, and reported to the war department; and the assistant professor, when the professor has his section under instruction, shall take charge of the section usually under the instruction of the latter. Lectures on such portions of the studies as are most suitable to them, may, with the assent of the superintendent, be substituted in lieu of the usual mode of instruction.

The 1st class will be taught, entire or in two or more sections, (according to circumstances,) the course of geography, history, and ethics.

Three lectures will be delivered to the 2d class, each week, on the first part of the course of chemistry, and the same number to the first class on the second part of the course of chemistry, and on mineralogy.

The cadets shall be organized into companies by the superintendent, for the purpose of military instruction.

The instructor of tactics, under the direction of the superintendent, will have charge of the infantry drills and instruction, and also of the police and discipline of the cadets.

The instructor of artillery, under the direction of the superintendent, will have charge of the second part of the course of practical military instruction. He will also have charge of, and be accountable for, the ordnance and ordnance stores furnished for the use of the military academy.

The sword-master will teach the exercises of the sword, at such times and under such regulations as the superintendent may prescribe.

Each professor and instructor at the head of a separate department, shall be the judge of the proper mode of conveying instruction in his own department, and held responsible for the correctness of that mode.

Each instructor having immediate charge of a class, or section of a class, for instruction, shall keep daily notes of their progress and relative merit; and at the end of each week, shall report thereon to the superintendent.

An abstract of the weekly class reports, exhibiting the names of those who have been chiefly meritorious, as also of those who have been least so, in the respective sections, shall be made out by the superintendent, and forwarded weekly to the war department.

Discipline.

The professors, teachers, and cadets of the Military Academy, being a part of the Corps of Engineers, are by law subject to the rules and articles of war.

The cadets, not being commissioned officers, may be tried by a regimental or garrison court martial; but a cadet so tried, may appeal, in the manner prescribed by the rules and articles of war.

No cadet shall, in any case, be sentenced to suffer corporal punishment; nor kept in close confinement for a longer period than twelve days, nor be dismissed the service, without the sanction of the President of the United States.

As obedience and subordination are essential to the purposes of this institution, any cadet who shall disobey a command of the superintendent,—of any professor, teacher, instructor, or other superior officer; or behave himself in a refractory or disrespectful manner, shall be dismissed, or otherwise less severely punished, according to the nature and degree of his offence.

No cadet shall drink, nor shall bring or cause to be brought, into either barracks or camp, nor shall have in his room or otherwise in his possession, wine, porter, or other spirituous or intoxicating liquor; nor shall go to any inn, public house, or place where any of those liquors are sold, without permission from the superintendent, on pain of being dismissed the service of the United States.

No cadet shall play at cards, or any other game of chance, nor bring or cause to be brought, into either barracks or camp, nor shall have in his room, or otherwise in his possession, the cards or other materials used in these games, on pain of being dismissed the service of the United States.

No cadet shall in any way use tobacco, nor bring it or cause it to be brought, into either barracks or camp, nor have it in his room, or otherwise in his possession.

No cadet shall cook or prepare food in either barracks or camp, nor give an entertainment there or elsewhere, without permission.

No cadet shall be allowed to keep a waiter, horse, or dog.

Any cadet who shall wantonly damage any quarters or their appurtenances, shall, besides making good such damages, be otherwise punished according to the nature of his offence.

Any cadet who shall lose, damage, destroy, sell, or otherwise dispose of, his arms, accoutrements, books, instruments, or any other public property in his possession, shall, besides paying for the same, be otherwise punished according to the nature of his offence.

No cadet shall go beyond the walls of West Point, or such other limits as may be prescribed.

Any cadet who shall insult a sentinel by words or gesture, shall be dismissed or otherwise less severely punished.

Any cadet who shall answer for another at any roll-call, or who shall engage any other cadet to answer for him, shall be dismissed the service or otherwise less severely punished.

No cadet shall visit any other room, or be absent from his own, during the hours of study, or between tattoo and *reveille,* without permission from the proper authority.

On Sundays, except during the hours of divine service, at which all the members of the academic staff and cadets must be present, every cadet will attend to reading or study at his own room. No application for leave of absence shall be made on that day.

Any cadet who shall behave indecently or irreverently while attending divine service, or shall use any profane oath or execration, or profane the Sabbath, shall be dismissed or otherwise less severely punished, according to the nature of his offence.

The cadets are not only required to abstain from all vicious, immoral, or irregular conduct, but they are enjoined, on every occasion, to conduct themselves with the propriety and decorum of gentlemen. Any cadet who shall be guilty of conduct unbecoming an officer and a gentleman, shall be dismissed the service.

No cadet shall send or accept a challenge to fight, (with deadly weapons,) nor be the bearer of such a challenge, written or verbal; nor in any way, directly or indirectly, countenance or promote a duel; nor upbraid another for declining to fight; on pain of being dismissed the service of the United States.

Every cadet who is knowing to a challenge to fight having been, or about to be, sent or accepted by any other cadet, shall without delay, give information thereof to the superintendent.

No cadet shall use any reproachful or provoking speeches or gestures to another, on pain of being confined, and of asking pardon of the party offended in presence of his commanding officer.

Any cadet who shall, by any means whatever, traduce or defame another, shall be dismissed or otherwise less severely punished, according to the nature of his offence.

Any cadet who shall strike, or in any manner offer violence to, another, shall be punished in like manner.

Any cadet who shall beat, or otherwise maltreat any citizen, shall besides being amenable to the laws, be otherwise punished according to the nature of his offence.

No cadet shall sign any certificate or statement relative to personal altercations between members of the academy or army, or to any transactions of a private or personal nature, without permission from the superintendent.

All cadets who shall combine, or agree together, to hold no friendly or social intercourse with another; and any cadet who shall endeavour to persuade others to enter into such combination or agreement, shall be dismissed the service, or otherwise severely punished.

All combinations, under any pretext whatever, are strictly prohibited. Any cadet who, in concert with others, shall adopt any measure, under pretence of procuring a redress of grievances, or sign any paper, or enter into any written or verbal agreement, with a view to violate or evade any regulation of the academy, or to do any act contrary to the rules of good order and subordination, or who shall endeavour to persuade others to do the same, shall be dismissed the service.

If any cadet shall consider himself wronged by another, or by an officer, he is to complain thereof to the superintendent, who is hereby required to examine into the said complaint, and to take the proper measures for redressing the wrong complained of. Should the complaining party be refused redress, he may appeal to the war department, through the superintendent of the academy, whose duty it shall be to forward the appeal to the secretary of war, for his examination and order on the same.

All publications relative to the military academy, or to transactions at the military academy, are strictly prohibited. Any professor, assistant professor, teacher, academic officer, or cadet, therefore, who shall be at all concerned in writing or publishing any article of such character, in any newspaper or pamphlet, or in writing or publishing any handbill, shall be dismissed the service, or otherwise severely punished.

No cadet shall apply for, or receive, money from his parents, or from any person whomsoever, without permission from the secretary of war, on recommendation of the superintendent: any infraction or violation of which will be considered a positive disobedience of orders, and punished accordingly.

The strictest attention to study and all other duties, will be required. Every cadet therefore, who shall absent himself from duty of any kind, and fail to render a satisfactory excuse in writing, for such absence, shall be reprimanded, put upon extra duty, or confined, according to the circumstances of the case; and any cadet who shall be habitually negligent of his studies or other duties, shall be dismissed the service.

The professors, assistant professors, and teachers, will be held accountable for the regular and orderly conduct of their respective classes or sections while under their immediate instruction.

It shall be the duty of every professor, teacher, assistant professor, or acting assistant professor, as well as of every officer stationed at West Point, who is knowing to any violation of the academic rules and regulations, or to any crime, irregularity, neglect, or other improper conduct, of which a cadet has been guilty, to report the same without delay to the superintendent.

All immoralities, disorders, misbehaviour, or neglect, of which cadets may be guilty, to the prejudice of good order and military discipline, though not herein expressly mentioned, are to be punished according to the nature and degree of the offence.

The superintendent will cause a registry to be kept of all delinquencies and punishments which may take place at the academy; and, at the end of every month, will report to the war department the names of those cadets who, during the month, have been most distinguished for correct deportment; also the names of those who have been guilty of offences, specifying the number of offences committed by each, and of those who have been punished during the same period, specifying in each case the nature and degree of the offence and punishment.

All necessary regulations for interior police and discipline, not inconsistent with the foregoing, will be established by the superintendent, (to be reported to the secretary of war,) and will be duly observed and obeyed accordingly.

[We have omitted, for some more convenient opportunity, the regulations of the academy under the heads of *promotion*, *furloughs*, *accounts*, and *uniform*.]

AGRICULTURE.

ARTIFICIAL GRASSES, OR GREEN CROPS.

From the Complete Grazier.

(Concluded from p. 161, American Farmer.)

6. *Saintfoin* (*Hedysarum onybrychis*,) vegetates, with uncommon luxuriance, on dry, chalky soils, where it flowers in June and July. The best seed has a bright husk, the kernel being plump, externally of a bluish or grey cast, but, when cut, internally of a fresh greenish colour.

Saintfoin requires a clean soil; the seeds should be *fresh*, and sown towards the close of February, or early in March. The quantity varies from four to eight bushels per acre, broad-cast, according to the nature of the land; though four bushels are, in general, fully sufficient: in the drill-culture three bushels are enough. Saintfoin, indeed, is sometimes sown with barley, as with clover, in the proportion of from one to three bushels per acre, with the addition of five pounds of *trefoil*, which last is said to check the growth of weeds till the saintfoin has taken deep root. During the first year, no cattle ought to be allowed to graze on it, as their feet will injure it; nor should it be fed down by sheep the succeeding summer, as they are apt to bite the tops of the roots, the growth of which would be immediately checked. In the following summer, a crop of hay may be made, and the after-math fed down with cattle of any description, excepting sheep, for the reason above assigned. At the end of seven or eight years, the soil should be manured with dung—or, if it be sandy, with marl.

In case the first season for mowing prove wet, the saintfoin ought to be left for seed; it should, however, on no account be cut before it is in full bloom, as the quality of the hay would thus be materially injured—but if cut and given to cattle in a green state, it would produce a second crop in the same year. This plant is chiefly consumed in the form of hay; but, whether thus used, or employed in soiling, it is from its great succulence equally valuable for feeding cattle, and especially horses, which are asserted to be materially strengthened by it, without the aid of oats. It ought, however, to be remarked, that saintfoin, though it increases the quantity, does not, in the opinion of some farmers, improve the quality of milk in cows; while by others it is asserted, not only to make the cream richer, but also to give the butter a better colour and more delicate flavour.

Swampy soils are by no means congenial to this plant; but as there are numerous dry, stony wastes on which it will grow, it certainly deserves to be more generally introduced into culture, especially as it will produce, on the worst lands, at least one ton of hay, together with a considerable after-math.

7. *Bush-vetch*, (*Vicia sepium.*)—This vegetable grows in woods, hedges, pastures, and meadows, and flowers in May and June. It does not attain any great degree of height, seldom rising to four feet; but, as it possesses the valuable property of speedy growth after being cut, it promises to be a useful plant for pastures. It shoots earlier in the spring than any other eaten by cattle, vegetates late in autumn, and retains its verdure throughout the winter. The culture of the bush-vetch was recommended by Dr. Anderson,[*] so long ago as in 1774, though it has not been much practised since that time, principally from the difficulty experienced in collecting the seeds; as the pods burst and scatter them about, and the seeds are frequently devoured by the larvæ of a species of *catelabus*.[†] From experiments that have been made in regard to the culture of the bush-vetch, it is certainly worthy of trial A small spot of garden ground was sown with the seeds of this plant in drills, and Dr. Withering states that it was cut *five* times in the second year, when it produced at the rate of twenty-four tons per acre of green food, which would be nearly four tons and a half when dried. From an experiment likewise recorded by Mr. Swayne,[‡] the produce of the hay, in part of a field wherein the bush-vetch naturally abounded, was twenty-four tons eleven hundred weight and three-quarters per acre, which is upwards of one-third more than is generally yielded by lucerne.[*]

8. *Burnet*, (*Poterium sanguisorba.*)—This vegetable is chiefly used for early sheep-feeding, though it may also be cultivated with great advantage for soiling cattle. It is very hardy, being little affected by droughts in summer, or by severe frosts in the winter, and will even vegetate in that season. If it be reserved for the purpose of making hay, though its produce is in general abundant, it ought to be cut early, otherwise it will become coarse. In the culture of this plant, it is of great importance to have good seed, for which purpose a proper spot should be selected; and as the seeds shed when ripe, they ought to be cut in the morning while they are moist with the dew, and thrashed out on the same, or on the following day. Those who wish to save the seed should, according to Rocque, who first introduced the culture of burnet, feed the grass till May, otherwise it will be too rank and lodge. Burnet flourishes best on dry soils, and may be sown in April, May, June, July, and August; for *sheep pastures* it should be broad-cast, or sown with the hand; for other purposes, it may be advantageously drilled. During the first year, it will require to be kept very clear from weeds, which may be effected by harrowing—for, being a strong, tap-rooted plant, the teeth of the harrow will not injure the roots: and, in the second year, it will become sufficiently strong to choke all other grasses.

9. *Cichory*, (*Cichorium intybus*,) also called common wild succory, is a vegetable, the value of which, for feeding cattle, has only been known within a few years. On blowing sands, or weak and poor soils, Mr. Young thinks it superior to any other plant; and he observes, that if it be sown with a portion of burnet and cock's-foot grass, it will form a layer for six or seven years, far exceeding those made with trefoil, rye-grass, and white clover. The best seed is undoubtedly that which is obtained by the farmer from the plants themselves; and, as they produce seeds in great abundance, it may be easily collected by hand: but the mode of sowing varies according to the intention for which it is raised. Thus, for feeding cattle it is usually sown in conjunction with oats, or other spring corn, at the season the latter is usually deposited in the ground; but for soiling it is sown alone, from the second or third week in March till the close of summer, the earlier the better, on account of the hardy nature of this herbaceous perennial. In general, the seed is broad-cast, though Mr. Young thinks it best to be drilled alone on poor land, in rows, about nine inches, on better soil at twelve inches, asunder, after the soil has been duly pulverized; when sown, it only requires to be once lightly harrowed; but, if drilled, will be greatly improved by an occasional scarifying.[†]

Cichory is extremely luxuriant, far exceeding the produce of burnet, lucerne, or saintfoin, and therefore will admit of being often cut for soiling during the summer. For the first year, one or two cuttings or mowings will be sufficient, which may, in subsequent seasons, be repeated three or (Mr. Young says,) four times, beginning in April or May, and cutting every second month till October.[‡]—This plant, also, may be made into hay, which, though coarse, is said to afford considerable nourishment—but its chief use is for soiling cattle during the summer months, and it is likewise excellent for sheep-feeding, receiving less injury from hard stocking than many other vegetables. The culture of cichory has been carried on to a considerable extent by the late Duke of Bedford, and by Messrs. Martin, Wakefield, and A. Young, sen'r, of whose interesting experiments we regret that our limits will not allow a detail.* Its culture has, we are informed by an intelligent American agriculturist, been strenuously recommended to the notice of farmers in the western hemisphere, though we have not yet heard with what degree of success, or to what extent it has been practised.

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[*] "Essays on Agriculture," vol. ii.

[†] Withering's "Botanical Arrangement of British Plants," vol. iii.

[‡] "Letters and Papers of the Bath and West of England Society," vol. iii.

[*] "Letters and Papers of the Bath and West of England Society," vol. iii.

[†] Farmer's Calendar.

[‡] "Annals of Agriculture," vol. xx.

10. *Spurrey* (*Spurgula arvensis.*)—The common, or corn spurrey, is an indigenous vegetable, flourishing in corn fields and sandy situations, where it flowers from July to September. Its culture has hitherto been but little, if at all, practised in this country—though, from the avidity with which it is eaten, it deserves to be more generally known, being peculiarly calculated to fatten sheep, as also to increase the milk of cows. Further, spurrey continues green till a late period in autumn, and often throughout the winter, on which account it has long been cultivated in Flanders; we have, therefore, been induced to recommend it to a fair trial by practical agriculturists.

11. *Tares,* (*Vicia.*)—There are two varieties of the common tare, (*V. sativa,*) called the *spring* and *winter* tares; the former of which is less hardy than the latter. The spring tare is usually sown about the end of March, or early in April; and the winter tare in September, (the earlier the better,) in the proportion of from eight to ten pecks per acre, broadcast: for the drill culture, half that quantity will be sufficient. Both these varieties are of very essential service in soiling cattle of every description—especially the winter tare, which comes into use just as the turnip crops fail, and affords a succulent food to ewes and lambs. Tares are rarely made into hay, on account of the great loss they are liable to sustain from wet, as well as on account of the more than usual care requisite in making them into hay. In Gloucestershire, the winter tare is cultivated as pasturage for horses, and is eaten off so early as to admit of turnips beiog raised the same year. They produce abundance of seed, which the farmer will do well to collect, and keep separately, from the great resemblance which the seeds of the two varieties bear, so that they are liable to be often mixed.

There are a few other species of tare or vetch worthy of the agricultor's attention, viz:

1. The *Strangle Vetch,* or *Tare,* (*V. lathyroides,*) which abounds in chalky and sandy soils. Its culture has lately been strenuously recommended by Mr. Amos; it affords a tender and agreeable food to sheep.

2. The *Tufted Vetch* (*V. cracca,*) attains a considerable height, and produces abundance of leaves. This sort, which flowers in July and August, as well as the wood vetch, (*V. sylvatica,* which rises from two to four feet high,) is said to restore weak or starved cattle to their strength more speedily than any other vegetable hitherto discovered.

3. The *Broad-leaved Vetchling,* or *Everlasting Tare,* (*Lathyrus latifolius,*) has hitherto been raised in gardens, chiefly for the sake of the fine flowers. It often attains to the height of ten or twelve feet, and produces abundance of foliage. It is eaten most eagerly by cattle, and was several years since recommended to the attention of farmers by Dr. Anderson, as promising to afford a large crop of hay; though it appears hitherto to have met with but little notice, in an economical point of view.

DISEASES OF CATTLE.

And signs of approaching changes in the weather.

The brute creation are, in general, liable to fewer maladies or complaints than mankind; and, as their diseases are less complicated, they are, of course, more easily to be relieved: yet, among the various phenomena in the history of man, it is not the least singular, that the treatment of sick cattle has hitherto been confined chiefly to the most illiterate and ignorant peasant—men equally unacquainted with comparative anatomy, and with the relative powers of medicine. Hence many thousands of valuable beasts have necessarily perished for want of that assistance which attentive observation, aided by sedulous inquiries, might have remedied, if not altogether prevented, by an unremitting regard to cleanliness in every department connected with the rearing of cattle.

With animals, as with the human frame, the variations of the atmosphere have a material influence on health; hence, though the limits of the present work confine our discussions to the chief distempers affecting cattle in general, we trust it will not be altogether useless to premise a few hints, founded on experience, relative to the ascertainment of the different changes of the weather—more particularly, as an occasional reference to these remarks may afford the farmer some guide in directing the diversified operations of the field.

Among the various phenomena which attentive observers have found to indicate approaching changes in the atmosphere, the following may be selected as affording the most certain signs.

I. *By animals.* 1. Previous to rain and wind, or stormy weather, *neat cattle* and *sheep* seem more than usually desirous of feeding in their pastures, and to leave them with reluctance. A similar change is announced by the uneasiness of *swine,* which grunt loudly, and retire to their sties; by *geese* and *ducks* washing themselves repeatedly, and with little intermission, flying anxiously backwards and forwards, by *swallows* flying low and skimming along the surface of the water, twittering with more loudness than usual; and by *poultry* rolling much in dust and sand, or gravel. Wet and windy weather is likewise indicated by *dogs* becoming drowsy and stupid, and exhibiting an evident reluctance for food, except grass, (particularly the species denominated dog's-grass, or couch grass;) and by *cats* losing their vivacity, and remaining within doors. *Continued rain* is announced by *pigeons* returning slowly to their cotes; a change from cloudy or unsettled to greater wet, by *flies* stinging and swarming more than usual; and a sudden variation, accompanied with a storm, by *wild ducks, plovers, bustards,* and other *aquatic birds,* withdrawing to the sea-coast, or to the marshes.

The contrary circumstances evince the longer or shorter continuance of fine weather; to which may be added, that *bees* flying abroad, and labouring with that industry which has become proverbial—*crows* croaking in the morning—the *robin,* or *redbreast,* singing early from the more elevated branches of trees—and *gnats* flying in a columnar form, within the rays of the setting sun, are all indications of fine or serene weather.

II. *From the appearance of the earth.* Thus moist stones and dry soil prognosticate rain; a continued fall of which may be expected, if the ground seem nearly dry, and the roads almost, if not wholly, free from mud: as the contrary occurrences announce, that the evaporation of humidity has ceased, and, consequently, that fine weather is approaching.

III. *From the atmosphere.* If in the evening a white mist be spread over a meadow, contiguous to a river, it will be evaporated by the sun's rays on the following morning, and is an indication of fine weather throughout the day; so in the morning, if a mist, which is impending over low lands, draw off towards those which are more elevated, it announces a fine day. The gradual diminution of clouds, till they can no longer be seen in the air, is a sign of fine weather; so likewise does the continuance of abundant dew upon the grass after a serene day. The contrary events announce a change of weather, which may be more clearly known by the clouds gathering and lowering; by the sky, after serene weather, becoming undulated as it were with small clouds. During winter, if the clouds appear not unlike fleeces, *i. e.,* thick and close in the middle, and very white at the edges, the surrounding sky being remarkably blue, they indicate hail or snow, or cold, chilling showers of rain. Further, where the clouds appear moving in two opposite currents, and the lower current is wafted rapidly before the wind, it is a certain sign of rain; and, if they occur during summer, or generally in hot weather, they announce thunder-storms. If the rays of the *sun* break through the clouds, and are visibly dazzling in the air, the latter is loaded with vapours that will speedily descend in showers of rain. Thunder is mostly preceded by hot, and followed by cold and drizzling, or showery weather. Frequent variations of the wind to the different points of the compass evince the speedy approach of rain, particularly if it *whistle* or *howl* in its course through the atmosphere. The west wind is usually damp, on account of the vast quantity of vapour it collects in its progress over the Atlantic ocean; the south wind, which blows from the torrid zone, is the warmest of the four—as the north wind is the coldest, while the east wind is the most dry; but if rain fall during the prevalence of an easterly wind, it may be expected to continue, with little intermission, for four-and-twenty hours.

IV. *From the seasons.*—1. A moist autumn, followed by a mild winter, is usually succeeded by a dry and cold spring, in consequence of which vegetation is materially retarded: such a spring occurred in 1741. 2. Should the summer be unusually cold and wet, the ensuing winter may be expected to be extremely cold; for the heat, or warmth of the ground will be dissipated, or carried off, in consequence of such unusual evaporation. 3. Very wet summers are mostly attended with an increased quantity of seed on the dog-rose and white-thorn bushes, so that the uncommon fruitfulness of these shrubs may be regarded as a certain indication of an intensely cold winter. 4. A severe winter is uniformly predicted by cranes and other birds of passage migrating early in autumn—for these creatures never take their flight southwards until the cold season has commenced in the northern regions. 5. Should frequent showers fall in September, it seldom rains in May; and the reverse. So there usually falls less rain in April than in October, in the proportion of one to two—in March than in November, in the proportion of seven to twelve.—6. On the contrary, should the wind blow from the south-west, during either summer or autumn, and the air be uncommonly cold for those seasons, a profuse fall of rain may be speedily expected.—7. A kind of crisis takes place in the atmosphere after great storms, rains, or similar violent commotions of the clouds, so that they are for some months attended with a regular succession either of bad or of fair weather. Lastly, a cold and rough autumn prognosticates an intense winter; as the latter season, when rainy, is mostly succeeded by an unproductive year.

For the preceding remarks, we are chiefly indebted to an interesting tract, (which in fact every farmer should possess,) entitled "The Farmer's and Gardener's Directory, containing the most approved rules and directions for foretelling the changes which take place in the weather, &c." We shall conclude these hints respecting the atmosphere, with the following rules laid down by Mr. Kirwan, from observations which had been made in England, from A. D. 1677 to 1789, during a period of 112 years.

1. When no storm has either preceded or followed the vernal equinox, the ensuing summer is in general dry, or at least so five times out of six.

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* See "Annals of Agriculture," vols. xv., xvii., xx., xxviii., where numerous valuable accounts of the culture and applications of this plant are given.

2. If a storm happen from an easterly point on the 19th, 20th, or 21st day of May, the succeeding summer will also be dry four times in five. A dry summer will likewise follow, if a storm arise in any point of the compass on the 25th, 26th, or 27th days of March.

3. Should there be a storm either at south-west, or west-south-west, on any day from the 19th to the 21st of March, the ensuing summer will be wet five times out of six.

In England, if the springs and winters be *dry*, they are generally *cold;* but if *moist* or *humid*, they are usually *warm;* whereas, *dry summers* and *autumns* are mostly *hot;* as, on the contrary, *moist summers* are *cold.* Thus, if the moisture or dryness of a particular season be ascertained, an idea may be formed with tolerable precision respecting its temperature, and the farmer, by attending to the various indications of the weather, will be enabled to provide accordingly for the exigencies of his cattle stock. [*Complete Grazier.*

ON PACKING COTTON,

As practised in South Carolina—with an Engraving.

Sir, *South Carolina, July* 31, 1825.

The request of Mr. Francis H. Smith, contained in No. 18 of the 7th vol. of the American Farmer, accompanied by your's, asking for information relative to the construction of machinery for packing cotton, has induced me to endeavour to furnish it.

There are a great variety of fixtures for packing cotton. The simplest, and, in my opinion, the best, is such as I shall endeavour to explain by a sketch of the front view of a "cotton screw," and a statement of the number of pieces of timber, and their dimensions, which, when put together, form the necessary machinery for packing cotton in square bales. The screws are made of wood, or of cast or wrought iron. I consider those of iron greatly preferable to those made of wood. We now resort to two modes of propelling them; *i. e.*, animal and water power. The last is infinitely best for those who have that power at command. When animal power is applied, the screw works perpendicularly; when water power is used, horizontally.—In this last mode, the screw receives only a circular motion; the packing chest, which moves on four wheels, being drawn against the *follower.* In the other, the screw not only is turned round, but also descends and forces the cotton to the bottom of the chest, by the follower, which is attached by a bolt to the screws. Wooden screws are necessarily erected out of doors, and exposed to the weather, because of the unavoidable length of the lever; so, indeed, are most of the iron ones, but not necessarily. The most common size of the wooden screw is fourteen inches diameter; the iron ones six inches. The first will wear out in packing about a thousand bales, if, indeed, it does not rot before; the latter can pack almost any number, with proper care. I have one, carried by water power, that has packed more than seven thousand bales, and is uninjured: but an advantage, almost equally decisive, results from the convenience with which they may be erected in a house twenty feet square. I have never known persimmon tried; do not doubt it would answer admirably, if it could be completely secured from the weather; when exposed, it becomes tender almost immediately. Post, turkey, and black oak were, for a time, exclusively used; each did well; now, common pitch pine is preferred by many. The thread of the screw is three inches at the base, (the lower angle more acute than the upper,) and one and a half inch deep. A hole, bored lengthwise through the screw, prevents cracks. The sketch is intended to represent a wooden screw. All the parts are precisely alike, for one of iron, except the compasses, the span of which, for a wooden screw, should be at least fifty feet: half that distance is sufficient for the other, or iron screw. The longer the screw, the more conveniently the cotton can be placed in the chest, as it admits the chest to be so much the higher; eight feet depth of chest will contain sufficient cotton to make a common bale, five feet long. The space between the upper and lower cross-trees, may be nine feet six inches; between the two end timbers five feet: the doors should not be less than two feet six inches high. From the top of the doors to the bottom of the follower, when the screw is raised, should be not less than five feet six inches, and should be enclosed on each side with two inch plank, strongly spiked to the two end timbers. The follower may be ten inches thick, and the width and length of the chest, allowing half an inch play at each end and side. One bottom cross-tie, twelve inches by twenty inches; one upper cross-tie, in which is formed or placed the female screw, twenty inches square. Two end timbers, twelve inches by twenty inches. One lever, twelve inches by eighteen inches; six braces, eight by ten inches, two in front and two behind, in addition to the two in the sketch. The compasses fourteen by six inches at top, and six inches square at the bottom ends, to either of which the horse is attached. One foundation timber, twelve by twenty inches, and twenty feet long. The length of the end timbers and compasses will be adjusted to the length of the screw; as that of the two cross-ties, will be, by that of the bale: the head of the end timbers should rise at least twelve inches above the upper cross-tie. The tenons should pass as far through the foundation timber.

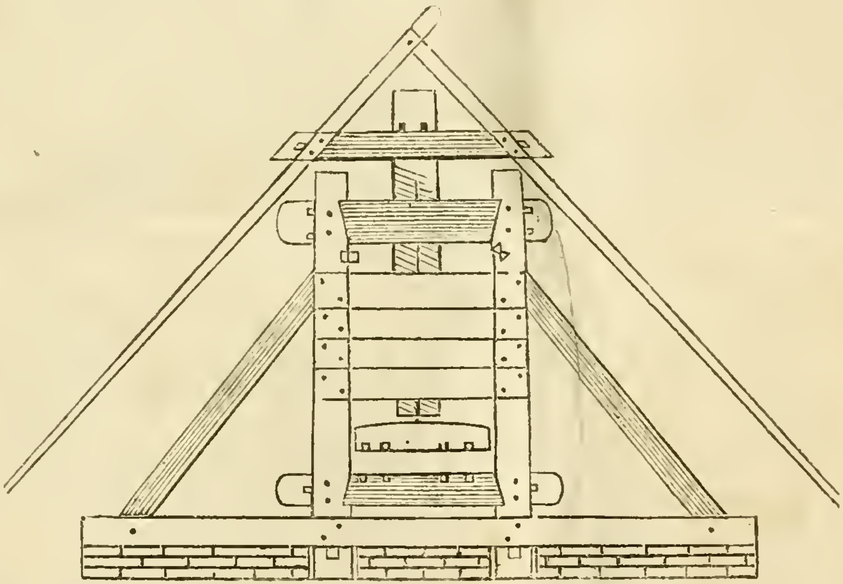
It is easy to comprehend the application of water power to the cotton screws, by supposing the sketch to be stripped of all its parts, except the screw and packing-chest; lay these horizontally, so that the bale, when packed, will stand on one end: one gudgeon of the water wheel shaft is cast with a "*coupling*," a cast iron sleeve receives this, at one end, and the head of the screw, at the other; put the water wheel in motion, and the screw turns accordingly: the water is conducted to the water wheel by similar gates at both sides—the screw, therefore, "packs" when one gate is hoisted, and unpacks when the other. A wheel, eighteen feet diameter, and buckets five feet long, with four feet live water, will pack a bale in four minutes. The bottom of the wheel should be at least twelve inches above the sheeting, to prevent the "back lash;" the arms should be fastened to the shaft of the water wheel by cast iron flanges, such as are used for the same purpose on board of steam boats.

The manner of hanging the doors and securing them, together with several other minute arrangements, are not stated, believing it unnecessary.

If the above shall be of any service to you, or your correspondent, it will be very gratifying to

A Cotton Planter

Front View of a Cotton Screw.



PROCEEDINGS OF AGRICULTURAL SOCIETIES.

(Communicated for the American Farmer.)

At a stated meeting of the Philadelphia Society for promoting Agriculture, held on Tuesday last, it was ordered that the following letters be published with the Resolutions adopted on the occasion.

Resolved, That the Society highly approves of the attention and industry of William M. Carteret, in the cultivation of Silk Worms, and that a premium of five dollars be awarded to him.

July 22, 1825.

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Arch-Street, 7th mo. 8th, 1825.

To the Philadelphia Society for Promoting Agriculture.

I learned a few days since, that a boy in Southwark was engaged in the cultivation of Silk Worms, and upon making him a visit found him busily occupied with them, having largely increased his stock from a few French Worms, which had been given to him about a year ago. He was requested to furnish an account of his labours, with specimens of the Silk, which was accordingly done, and I now submit to the Society his letter, and the specimens.

This lad is a child of very respectable parents, but who are not in affluent circumstances. I was much interested with the intelligence, and thrifty turn of the boy, who devotes hours between school to a useful purpose, which most others of his age would waste in rambling about the streets. Whether the Society could bestow some encouragement upon him, is worthy of consideration. A vote approbating his conduct, and perhaps adding a small reward in money may be proper. Such evidences of respect for merit, especially in young persons, exhibited even in this humble manner, are calculated to promote the best interests of a community whose welfare consists in the industry and virtues of its members.

I am, very respectfully,

ROBERTS VAUX.

Philadelphia, June 29, 1825.

To Mr. Roberts Vaux,

Dear Sir,—You requested me to inform you where I obtain the Silk Worms; Joseph Ord brought them from France, and nineteen of them were given to me about the middle of last June, by his cousin Benjamin Karrick. I was then twelve years old. I fed them on white mulberry leaves for about two weeks, when I found that they wanted to spin. I then carefully put them in papers for the spinning of their Silk; and in the space of ten days after they had begun to spin, I wound them off and put away the pods in boxes. In eight or ten days after, they came out of the pods into a white miller, male and female; they then lay their eggs, which are very small, and they amount to above an hundred each; the eggs which they had lain I carefully rolled up in paper and put them away, until April, when I was examining the eggs I found a small black spot at one end, and in four days after I found small black worms, which I removed upon other papers. I then gave them young sallad for about eight days; I then fed them upon white mulberry leaves until they began to spin. They have now increased to about two thousand Worms. I lost many in April, in a wet spell, which amounted to about five hundred. I gave a great many away, and four hundred are now spinning their Silk. One hour in the afternoon I take in learning my lessons. and the rest of my leisure hours I am busy in winding off my Silk. Each Worm spins from 3 to 5 hundred yards of pure Silk, besides tow; it takes about six hours to wind off a set of 25 in number. I now send you specimens of the Silk, &c.

Yours, &c.

WILLIAM MORGAN CARTERET.

No. 399, South Front-Street.

FLIES ON HORSES.

Sir, *Wheatland, August 8th, 1825.*

A circumstance recently occurred here of so singular and extraordinary a nature, that I am induced to communicate it to you. I had two very fine brood mares, with Gracchus' foals by their sides, which, in consequence of the high value I attached to them, were admitted within my lawn, where they had become excessively fat. During a period of intensely hot weather the latter part of June, these mares were assailed by a swarm of flies, and harrassed to such a degree that I found it necessary to remove them to a distant pasture, where I imagined they would be less exposed to so dreadful an annoyance. They, however, became extremely ill—one died, and it has been with the greatest difficulty, and the most unremitting care and attention, that the life of the other has been till now preserved. She is still in a state of great debility and considerable disease. From the simultaneousness of the attack, the novelty and identity of the symptoms, I was at first induced to ascribe the phenomenon to poison, and under this impression I caused the deceased animal to be dissected. The intestines were found to be in a perfectly sound and healthy state, but the flesh, particularly about the neck, back and sides, was in a state of putrefaction—and I am now thoroughly convinced, that the venomous stings of these pestilent insects, aided, perhaps, by the extraordinary obesity of the animals and the violent heat of the weather, producing inflammation and gangrene, were the sole causes of the extraordinary incident above described. We have been annoyed in a most distressing and unusual manner this summer, especially during the hottest part of it, by these odious pests. I have resorted to bruised walnut leaves and train oil, to repel them from my horses, but with little effect. If you, or any of your correspondents, can suggest a better preventive for the evil, the information will be very acceptable to,

Dear sir, yours truly,

H. S. TURNER.

[An eminent physician, to whom we showed the above, says there is no doubt but the solution given is correct as to the cause of the death—but it would be desirable, if there be any thing peculiar or uncommon in the fly, to have a sight of it, that it might be characterized by some competent entomologist.]

WHITE FLINT AND LAWLER WHEAT.

Baltimore county.

Having lately observed in the American Farmer, an assertion or supposition, that the above kinds are one and the same wheat, and having raised the Lawler for several years, and the white flint the last season, it has afforded me an opportunity of judging correctly; and, I am of opinion, that there are no two sorts of wheat which differ more in appearance than the above. The white flint produces more stalks from each grain, and each stalk is much larger and stronger; the blades are very broad and stand up, but the blades of the Lawler are long and slender, and hang down—generally of a paler green than other wheat, and the bottom blades die very early; but the former is a very dark green to the bottom until the wheat is of a considerable height, and ripens as early as the red chaffed bearded, whilst the latter ripens very late. And from last year's experience, I am decidedly of opinion, that the former is the best wheat I have sown; and have no doubt it possesses the qualities ascribed to it of resisting the fly, as my crop was not *the least affected,* whilst my *other sorts by the side of it,* and *sown at the same time* was very *much injured.** It is a fact that the stalk is solid two joints from the bottom, and part of the third. The grain was white and heavy, and produced a very good crop.

LEVI HARTLEY.

WHEAT FROM ASIA.

Middleburg, Md. 2d August, 1825.

Sir,—I am happy in having an opportunity of communicating to you, the success that resulted from the wheat that you were kind enough to present to me, that you represented as having been brought from Asia. The article under consideration, I distributed in small quantities among several of the most attentive and observing agriculturists in this neighbourhood; all the reports of which coincide in every respect. The wheat was consigned to the earth, early this spring. It flourished well, and appeared to be equally prolific with the different varieties of this article that is so successfully cultivated in this country. The average length of the heads did not exceed three inches, and the circumference of which was about an inch and a half. The grain was much larger, which circumstance, I am disposed to conclude, is to be attributed to its being new, and not having contracted to the usual size when properly dried. From the success of this article, being sown in the spring, I am led to believe, that in all probability, it has been brought from the southern part of Asia; and also, that this season of the year is the most proper time to commit it to the earth.

In relation to the "Cuba" tobacco seed, I am not as yet prepared to say any thing of an interesting nature, more, than that I have about two hundred very fine plants that I shall be able to cut in about two weeks; some of which I shall take great pleasure in presenting you with, as soon as I shall have it in a proper state to make use of. Mr. D. J. Poole, one of my neighbours, is about housing, perhaps among the best tobacco, at this time in the county. I cannot conceive, that any sight could have been more gratifying than that of viewing about nine acres of this article, prior to its having been cut.

With sentiments of consideration,

I am, dear sir,

Yours, &c.

WILLIAM ZOLLICKOFFER, M. D.

CHANGE OF WHEAT TO CHEAT.

Geauga county, July 22, 1825.

Sir,—I have thought fit to communicate the following fact on the possibility of changing the character of plants, elucidating a subject sometime since contested in the Farmer. It could be proved by a dozen witnesses in any court. The wheat crop failed here in 1822; that we imported seed from Jersey, under the denomination of "Early Turkey," which turned out to be very late, and bearded. Last fall Mr. Marshall sowed a lot on sandy silicious soil, which did well until February, when he pastured thirty or forty sheep on it. When it headed the last of June, its character was almost entirely changed to "cheat." There was not a wheat stalk in one hundred of the cheat. At sowing, there might have been this proportion of cheat to the true crop. With my best wishes I remain. Veritas.

P. S. The bearded wheat did well at harvest in '23; since has been degenerating, and in many places the straw fell this harvest, and the seed so shrivelled and light it was not worth cutting.

ON THE SELECTION OF SEED WHEAT.

The following communication from Thos. Knight, Esq. (in the Hereford Journal,) will doubtless prove highly interesting at the present moment to agriculturists:—"A good deal of the strong wheat soil of Herefordshire remains unsown, and must be sown in the end of this month, or in the next, and it is important to select seed corn of early habits. I tried the experiment of selecting seed wheat *from a warm gravelly soil* in a *warm* part of the country, and other seed wheat of the *same* variety (the common red straw,) from a *cold white clayey soil,* in a very *cold* part of the country. Both were sown at the same time, and upon contiguous ridges, when the crop which sprang from the seed corn which had grown upon a *warm* gravelly soil ripened a fortnight before the other. The advantages of selecting such seed must be obvious. I have stated facts—the transactions of the Horticultural Society show that fruits, such as the apple and pear, and perennial plants, acquire in hot climates habits of ripening late, whilst cultivated natural plants acquire the power of ripening early, by having, through successive generations, had *their period of maturity accelerated.* The Scotch farmers purchase seed barley from the warmest soils in England; having found that the crop which springs from this will ripen upon their cold hills, nearly three weeks earlier than those varieties which have adapted their habits to their late and cold climates." [*English Paper.*

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* Perhaps the white flint was sown in richer and better ground than the other. Wheat on rich or manured land, it is well known, is always less liable to be destroyed by the fly, than that which is sown on land of inferior quality, or land not manured. The writer of the above is, we understand, a respectable citizen, who resides on and cultivates the farm of Mr. Robert Sinclair. He is likely, we should suppose, as well as Mr. Sinclair himself, who often visits his farm, to have taken very particular notice of the facts stated, yet his testimony is diametrically opposed to the observations of many of the most respectable farmers in the state. And hence may verify our remark in the last number, that different *soils* may produce different results. The solidity of the stalk is curious—we should be glad to have some for exhibition.

Ed. Am. Farm.

MISCELLANEOUS.

THE NORTH AMERICAN SYLVA,

Or a description of the Forest Trees of the United States, Canada and Nova Scotia, by F. Andrew Michaux.

[This very elegant and valuable work has been presented to the Maryland Agricultural Society, by W. M'Clure, Esq. of Philadelphia, and has been deposited for the use of any member of the Society, with J. S. Skinner, its corresponding secretary.

Mr. M'Clure, purchased lately in Paris, the whole remaining edition of the work and the copper plates, at the moment they were about to be sent to England, and with the liberal design of distributing them gratuitously amongst agricultural and other useful societies.

The text is illustrated and the book ornamented with beautiful coloured representations of the leaf, flower and fruit of all the trees described. These representations are executed with surprising truth to nature; and no adequate idea can be formed of the skill, perseverance and nice discrimination of the author, without having reference to them. We shall, however, as we can snatch occasional moments of leisure, look it over and make extracts from the text, of such passages as may appear most curious and entertaining to the general reader.—The following are from the *Introduction.*]

Before entering into any details concerning the plan which I have adopted, it should be remarked that the species of large trees are much more numerous in North America than in Europe: in the United States there are more than 140 species that exceed 30 feet in height, all which I have examined and described; in France there are but 30 that attain this size, of which 18 enter into the composition of the forests, and 7 only are employed in building.

To collect information, it was necessary for me to visit different parts of the United States. Beginning at the District of Maine, where the winter is as long and as rigorous as in Sweden, though 10 degrees farther south, I travelled over all the Atlantic states, in some of which the heat during six months is nearly as great as in the West Indies. Besides a journey of 1800 miles from north-east to south-west, I made five excursions into the interior parts of the country; the first, along the rivers Kennebeck and Sandy, passing through Hallowel, Winslow, Norridgewock and Farmington; the second, from Boston to Lake Champlain, crossing the states of New Hampshire and Vermont; the third, from New York to the Lakes Ontario and Erie; the fourth, from Philadelphia to the borders of the rivers Monongahela, Alleghany and Ohio; and the fifth, from Charleston to the sources of the Savannah and Oconee. In travelling along the sea-coast, I visited the principal ports to examine the timber employed in ship-building, and entered work-shops of every description where wood is wrought. The knowledge of which I stood in need was principally in the possession of mechanics; accordingly, I consulted the most skilful workmen, natives of the country and Europeans, and by means of a series of questions previously prepared, collected, for the benefit of the United States as well as of Europe, a mass of information which I trust will be found in the main correct.

In proceeding southward, I noted exactly the disappearance of some species of trees, and the appearance of others, according to the changes of climate or soil.

I have pointed out the trees which form an object of commercial exchange between the middle, northern, and southern states, or are sent to the West Indies and to Great Britain; the parts of the country which produce them, and the ports from which they are exported; the different kinds of wood employed for fuel, for enclosing fields, and in the mechanical arts; the sorts of bark used in tanning, &c.

I have endeavoured, also, to impress on the American farmers the advantage of preserving and multiplying some species, and of destroying others; for, in my opinion, a bad tree should not be suffered to exist where a good one might grow, and in no country is selection more necessary than in North America.

It may not be improper to observe that the Europeans have great advantages over the Americans in the management of woods. The principal forests are in the hands of the governments, which watch over their preservation with a solicitude dictated by imperious necessity. Experience has amply demonstrated that no dependance can be placed, for the public service or the general supply, upon forests that are private property: falling sooner or later into the hands of persons eager to enjoy their price, they disappear and give place to tillage. In America, on the contrary, neither the federal government nor the several states have reserved forests. An alarming destruction of the trees proper for building, has been the consequence—an evil which is increasing, and which will continue to increase with the increase of population. The effect is already very sensibly felt in the large cities, where the complaint is every year becoming more serious, not only of the excessive dearness of fuel, but of the scarcity of timber. Even now, inferior wood is frequently substituted for the white oak; and the live oak, so highly esteemed in ship-building, will soon become extinct upon the islands of Georgia.

At the close of the work will be placed a complete and particular recapitulation of the various kinds of wood used in different parts of the United States in the mechanical arts and for fuel, with a general index of the vulgar and scientific names.

In this first English edition important improvements have been made, particularly by inserting descriptions and drawings of several trees, such as the yellow wood of Tennessee, and the Ohio buckeye, of which I had not seen the flowers: of these species, the seeds which I brought from the United States in 1803, have grown up and bloomed since the publication of my work. I have, besides, added descriptions and figures of the trees, which principally compose the European forests, and which are the most commonly employed in building, pointing out those which might be advantageously propagated in the United States. The chestnut, the beech and the hornbeam are omitted, because their perfect resemblance in aspect, foliage and fruit to the analogous American species rendered a separate figure unnecessary.

I flatter myself that the course I have pursued in the execution of this task will be found more practically useful, and consequently more generally interesting, than if I had followed a more scientific path. I have been anxious to render my work acceptable to the great body of American agriculturists, to the farmers of the northern, and the planters of the southern states. It will afford me sincere gratification if I succeed in obtaining the approbation of the liberal and enlightened men by whom I was encouraged during my residence in the U. States.

To the pupils of the late professor B. S. Barton, professor D. Hosack, and Dr. Bigelow, animated like their masters with an ardent desire for the advancement of natural history, I leave the task of completing my work, and of offering to their fellow citizens a treatise on this interesting subject more worthy of their acceptance.

SAGACITY OF WOLVES.

From Captain Franklin's Narrative.

January 24th, 1824.—So much snow had fallen this night, that the track we intended to follow was completely covered, and our march to-day was very fatiguing. We passed the remains of two red deer lying at the bases of perpendicular cliffs, from the summits of which they had probably been forced by the wolves. These voracious animals, which are inferior in speed to the moose and reindeer, are said to frequently have recourse to the following expedient in places where extensive plains are bounded by precipitous cliffs.

Whilst the deer are quietly grazing, the wolves assemble in great numbers, and, forming a crescent, creep slowly towards the herd, so as not to alarm them much at first, but when they perceive that they have fairly hemmed in the unsuspecting creatures, and cut off their retreat across the plain, they move more quickly, and with hideous yells terrify their prey, and urge them to flight by the only open way, which is that towards the precipice; appearing to know, that when the herd is once at full speed, it is easily driven over the cliff, the nearmost urging on those that are before. The wolves then descend at their leisure, and feast on the mangled carcases. One of these ferocious animals passed close to the person who was beating the track, but did not offer any violence.

Dr. Richardson, (the medical attendant on the expedition) having the first watch, had gone to the summit of the hill, and remained seated, contemplating the river that washed the precipice under his feet, long after dusk had hid distant objects from his view. His thoughts were, perhaps, far distant from the surrounding objects, when he was roused by an indistinct noise behind him, and on looking round, perceived that nine white wolves had ranged themselves in form of a crescent, and were advancing apparently with the intention of driving him into the river. On his rising up, they halted; and when he advanced, they made way for his passage down to the tents. He had his gun in his hand, but forebore to fire, lest there should be Esquimaux in the neighbourhood.

[Further Extracts from Lawson's History of North Carolina, published in London in the year 1706. Sent to the Editor of the American Farmer, by an unknown correspondent. Page 127.]

THE ALLIGATOR.

"This animal, in these parts, sometimes exceeds 17 feet in length. It is impossible to kill them with a gun, unless you chance to hit them about the eyes, which is a much softer place than the rest of their impenetrable armour. They roar and make a hideous noise against bad weather, and before they come out in the spring. I was pretty much frightened with one of these once! which happened thus:—

"I had built a house about half a mile from an Indian town on the fork of Neuse river, where I dwelt by myself, except a young Indian fellow and a bull dog, that I had along with me. I had not then been so long a sojourner in America as to be thoroughly acquainted with this creature.

"One of them had got his nest directly under my house, which stood upon pretty high land, and by a creek side, in whose banks his entering place was; his den reaching the ground directly on which my house stood. I was sitting alone by the fire-side, (about 9 o'clock at night, sometime in March:) the Indian fellow being gone to the town, to see his relations, so that there was nobody in the house but myself and my dog; when all of a sudden this ill-favoured neighbour of mine set up such a roaring, that he made the house shake about my ears, and so continued like a bittern, (but a hundred times louder, it possible,) for four or five minutes.

"The dog stared as if he was frightened out of his senses; nor indeed could I imagine what it was, having never heard one of them before! Immediately again, I had another lesson; and so a third. Being at that time among none but savages, I began to suspect they were working some piece of conjuration under my house to get away my goods, though at any other time I have as little faith in their or any other working miracles by diabolical means, as any person living.

"At last my man came and presently undeceived me, (at the same time laughing immoderately,) and told me what it was that made the noise. These alligators lay eggs as the ducks do—only they are longer shaped and larger and thicker shell than they have. How long they are in hatching I cannot tell, but, as the *Indians* say, it is most part of summer. They always lay by a spring side, the young living in and about the same as soon as hatched. Their eggs are laid in nests made in the marshes, and contain twenty or thirty eggs. Some of these creatures afford a great deal of musk. Their tail when cut off looks very fair and white, seemingly like the best veal. Their flesh is accounted proper for such as are troubled with the lame distemper, (a sort of rheumatism,) so is the fat very prevailing to remove aches and pains by unction! The teeth of this creature when dead, are taken out to make chargers for guns, being of several sizes fit for all loads. They are white, and would make pretty snuff boxes if wrought by an artist. After the tail of the alligator is separated from the body, it will move very freely for four days. C.

SPORTING CLIO.

Interesting Match-Race over Tree-hill Course.

On the 29th of September next, will be run, a match for $1000 a side, play or pay, four miles and repeat, between the celebrated horses Henry and Flirtilla.

THE FARMER.

Baltimore, Friday, August 26, 1825.

MARYLAND CATTLE SHOW,

For the Western Shore.

It has already been announced that the Trustees of the Maryland Agricultural Society, have decided to make no alteration in their scheme of premiums to be distributed at their Exhibitions, to be held hereafter in the month of June.

The readers of the American Farmer, and all persons who are desirous of entering the lists, are referred for the scheme of premiums, to the sixth volume of the American Farmer, pages 10 and 401—bearing in mind that the premium offered for the best cultivated farm of not less than 100 acres, is a piece of plate valued at $50, instead of $20, as erroneously printed at page 10. As soon as we can find room, we will republish the whole list. The show will be at the Maryland Tavern, and always hereafter in June.

Wool.—We have had frequent occasion to observe how vague is the judgment of the generality of farmers as to the quality of wool, arising, naturally, from the want of experience, and the habit of minute observation. We allude to the middle and southern states, where there are few neighbouring manufactories of great power and capital to create demand, and to beget brisk and sharp-sighted competition amongst buyers and sellers. But the case is altering, and with it we may expect corresponding improvement in the care and management of this valuable animal. But how can we speak of care, where there is total neglect? of management, where there is not a show of system?

The relation of two incidents that occurred under our personal notice, will convince the reader how liable are inexperienced persons to be misled in regard to the quality of their wool, and how essential is the difference, as it affects the *price,* in cases where an unpractised touch, can discern none at all. Not long since, a most respectable farmer called on the Editor to say that he had received an application for some of his merino sheep, and inquired what he ought to ask for them. Why, that my friend, with that race of sheep, depends chiefly, of course, on the *fineness* of the wool. Oh! said the farmer, they are real merino, from imported stock, and kept unmixed. Editor—I am sure that is your persuasion, but I know too well how sheep are managed with us, not to apprehend that your very fine wool may not pass so well under the nice touch and accurate eye of the manufacturer. I think if you can get $10 per head for yours, you will do very well, unless they have been treated very differently from the mass of the imported flocks sold 15 years since in this market. Oh! said the farmer, I think that's too little—my sheep are pure merino. He was then invited into the office of the American Farmer, to show him what *really fine wool was.* We handed him a sample from the back of one of the Saxon bucks, (which are no other than merino, maintained with care in their greatest purity,) sold last year at Boston, and the property of H. Watson, jr., of East Windsor, Connecticut. Our friend the farmer looked at it and felt it once and again, and then observed—I believe $10 will do, I'll take the $10—good morning, sir. Some weeks after, another farmer of less experience, came to ask the same question. Very nearly the same dialogue ensued. He produced some of his *very fine wool,* we pulled out Mr. Watson's, and folding them in separate papers, sent them to Mr. Sykes, who has brought the manufacture of wool to great perfection in our own vicinity. The farmer's "very fine merino" was marked F, the Saxon D, and without any further explanation, we desired his opinion as to their comparative value. His answer follows:

"Upon the supposition that the wool D and F were in the same condition as to cleanliness, we should consider D worth from 80 to 100 per cent more than F."

Thus, suppose A. to have a flock of 100 Saxon or best merino—and B. to have 100 of what are *supposed* to be genuine; each flock costs the same for *keep*—whilst A. gets double as much money for the fleece of his flock when sent into the market.

Tobacco.—Amount of Inspections in the three state warehouses for the last week, 319 hhds.

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West Point, Regulations for the Government of the Military Academy, and Course of Instruction, concluded—Artificial Grasses, or Green Crops, concluded—Diseases in Cattle, from the Complete Grazier—On Packing Cotton as practised in South Carolina, with an engraving—Proceedings of Philadelphia Society for Promoting Agriculture—Silk Worms in Philadelphia—Flies on Horses—White Flint and Lawler Wheat—Wheat from Asia—Change of Wheat to Cheat—On Selection of Seed Wheat—North American Sylva, published in Paris—Sagacity of Wolves—The Alligator, from Lawson's History of North Carolina, 1706—Match Race over Tree-Hill course—Editorial, Maryland Cattle Show for the Western Shore—Wool—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	7		11	
COFFEE, W.I. Green, .	—	17½	18	20	25
do. Common,	—	16	16½	18	20
COTTON, Louisiana, &c.	—	24	25		
Georgia Upland, . . .	—	20	22		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	11	13	14	16
Dipt, ...	—	10	11		12
CHEESE;	—	6	8	10	12
FEATHERS, Live, . . .	—	35	36		
FISH, Herrings, Sus.	bbl.	2 18		2 37	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 75	5 00		
Fine, ...	—	4 25	4 37		
Susquehanna, superfi.	—	4 38			none
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	43	46		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	90	94		
do. Red, ...	—	85	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	40			
Barley, ...	—	50			
Clover Seed, Red . .	—	3 75		4	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	170			
HOGS' LARD, ...	lb.	8	9		dull
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, Havana, .	gal.	24	33	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 6a20d.	lb.	6½	7	7½	8
NAVAL STORES, Tar,	bbl.	2 25	2 50		
Pitch, ...	—	1 75	2 00		
Turpentine, Soft, . .	—	2	2 12		
OIL, Whale, common, .	gal.	24	26		
Linseed, ...	—	80			
PORK. Baltimore Mess,	bbl	15	15 50		
do. Prime, . . .	—	11 50			
PLASTER, cargo price,	ton.	4 00	4 25		
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 25	3 50		
SOAP, Baltimore White,	lb.	10	14	18	
do. Brown, .	—	6	8	9	10
WHISKEY, 1st proof, .	gal.	26			
PEACH BRANDY, 4th pr	—		82	1	
APPLE BRANDY, 1st pr	--	40			
SUGARS, Havana White,	c.lb.	13 00	14 00		
do. Brown, . .	—	11 00	11 50		
Louisiana, ...	—	8 50	11 00		
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	75			
Ginger, Ground, . . .	—	7	8		
Nutmegs, ...	—	2 00		2 25	
Pepper, ...	—	19		25	
SALT, St. Ubes, ...	bush	40			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	8 50		9	
WINES, Madeira, L. P.	gal.	2 50	2 70	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	40	45	unwashed but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	25	28		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

UNION AGRICULTURAL SOCIETY OF GEORGIA.

Agreeably to a resolution (on motion of Mr. John Couper, of St. Simon's,) of the Union Agricultural Society of Georgia, we publish the eloquent Address of Thomas Spalding, President, delivered to the society, in this city, at its first sitting.

[*Georgia Journal.*

"The task of working improvement on the earth, is much more delightful to an undebauched mind, than all the vain glory which can be acquired from ravaging it by the most uninterrupted career of conquest."

"——————The fall of kings,
The rage of nations, and the crush of states,
Move not the man, who, from the world escap'd,
In still retreats and flowery solitudes,
To Nature's voice attends, from month to month,
And day to day, through the revolving year;
Admiring, sees her in her every shape;
Feels all her sweet emotions at his heart;
Takes what she liberal gives, nor thinks of more."

At this first meeting of the gentlemen associated for agricultural purposes in Darien, it will be expected, after doing me the honour of placing me in the chair, that I should say something upon the objects of that association. Those objects are many, nor in my humble opinion are the means of carrying them into effect, beyond our reach.

Gentlemen, that independence that belongs to our government, and that liberty which belongs to the individuals who compose it, in the mighty blessings which they bring in their train, bring too, perhaps, with them, some moral feelings which had better far be left behind. The restless energy which liberty stamps upon the character of *freemen,* makes them look to their *common country* as their *common home,* and breaks down those local feelings, which, under other *forms,* take deep hold upon the *human heart,* and gives to man, perhaps, the sweetest joy he knows; when, retiring from the oppressions he has met with abroad, he seats himself down under his own vine and his own fig tree, and *then,* and only *then,* feels that there is none to make him afraid. Each object around him, becomes dear to him, because associated with his peace and his repose.

One of the chief objects then with all of us, should be to awaken in ourselves, and in those with whom we are united, *that local attachment,* which the form of our government, the wide spread of our territory, the flattering but too often false descriptions, which are given of every newly explored region, is calculated to diminish or destroy.

Let us bear in strong remembrance, that it was not in the regions of the north, it was not even in the temperate zone, as understood in Europe, nor yet within the tropics, where the sun, rolling on his path, sheds his vertic ray, but in the narrow region which separates the temperate from the torrid zone, *man was first awakened* into civilization, he first began to spread the arts and sciences around him.

Gentlemen, we are in the climate of Chaldea, and of Egypt, of Greece, of Tyre, and of Carthage. We are in a land, where rice and wheat, and cane and indigo, and cotton, and silk—where the olive and the vine, not only grow, but will find their favourite home, if man will only lend his aid.

We are bounded by hills on the west, and by four thousand miles of sea on the east, over which the fogs and the vapours are gathered, and are drifted, until they break upon our trees and our hills, and let down their moisture. We may fondly hope, then, that *nature, that does nothing in vain, and that Providence,* who acts by general means, for universal good, will not leave us, for ages yet to come, to desolating drought, the greatest enemy agriculture knows, this our local situation, this our sandy soils, this our wide-spread pine forests, forbid us much to apprehend; but we are told, or of ourselves we know, that beyond those *western hills,* are deep loams, resting on beds of lime stone, teeming with fertility, that fills us with wonder and admiration at a first view, and we are too often *won* before we have *deliberated.*—Yes, sirs, these fat and loamy soils, after a time, will give out their fatness, as they are stripped of their vegetable covering; as their trees sink before the axe, many of their rivers will disappear, as their small streams now do in the summer; and they will have to sink deep within the rocks, for that water, which, when found, is neither wholesome nor pleasant to man. And what, at last, are these deep loams fit for, but Indian corn or grass. Indian corn is one of the most valuable productions of the earth; but more of even this, has been raised in the eastern states, than ever was produced in the west—and while the corn of the east is vendible over the world, it can only in the west be employed in the fattening of cattle or the raising of stock. And this at last will be the great pursuit of men, from the Allegany to the Rocky Mountains—for this wide region differs but little in soil, in climate, and in productions, from the steppes of Tartary, over which Calmuc, and Cossac hordes, for these thousand years and more, have trailed their flocks. Perhaps there may be, and perhaps there will be, at Pittsburg and at Louisville, at St. Louis, and at New Orleans, other *Moscows* rising up, where the men of the east, and the men of the west, the men of the sea, and the men of the wild, will meet together for exchange. Think you, gentlemen, this picture too highly drawn. Captain Lewis, and Captain Clark, tell us, that in descending the Missouri river, though floating down its stream, such was the dryness of the atmosphere, that their inkhorns were emptied every twenty-four hours. Lieut. Pike, many years since discovered, and Major Long and his comrades, under the direction of the war department, have since explored a desert of many hundred miles in extent, where the rivers, like the rivers beyond Mount Atlas, in Africa, are absorbed in the sand, and where nothing vegetates but prickly and poisonous plants Gentlemen, none of all these regions present aught to draw us from our homes. True, they present to indolence, the mere necessaries of life cheaply procured, and in doing so, they take from man those higher impulses, which having given him enough by energetic means, make him seek for something more, something far beyond it.

You would not seek for wealth or fruitfulness in Polish plains, or Hungarian vallies, along the banks of the Danube—but you may find both the one and the other in Flanders, where their sandy soils have been deeply saturated with manure, and highly improved by human labour, so as to make a region once barren, the granary of France and Holland. You may find them in the sandy and gravelly plains of Piedmont, where, by the labour of man, water has been brought from their springs and mountain streams, to give them rice crops even beyond our own. Gentlemen, I wish you to understand me distinctly, upon this subject. I wish to impress you with my own convictions, that we combine more of the advantages of climate, more of the advantages of soil, and of local situation, than any other section of the United States; and among those benefits, Arthur Young, who brought more of philosophy into agriculture than any other man, of this, or any other age, makes climate the *first great good; with it,* no soil, but by proper application, may be made profitable—*without it,* the best are dead and inert.

And how, you may ask me, do I limit this region? By the Appalachian mountains on the west, and by the sea on the east; by Wilmington in North Carolina on the north, and by the river St. Mary's—for beyond that Florida is little more than drifted sand, thrown up like Cape Cod, by some great disruption of the sea: and here, gentlemen, I speak to you of what I have seen, and not of what I have heard.

From Wilmington, in North Carolina, to St. Mary's in Georgia, along the coast, for that whole space, the climate is not only adapted to the culture of rice, but each of the rivers have an alluvial district of considerable extent, over which the tides rise sufficiently high to water their fields, and to command machinery for cleaning or beating out their crops, and below which they fall low enough to drain. This is an essential quality which is wanting in going either north or south from these limits. I doubt if the waters of even the Chesapeake, ever fall low enough to drain their low lands, and the tides of the Appalachicola river, and the rivers emptying into Mobile Bay certainly do not. Cotton combines well with rice in the southern portion of this section. And hemp would, if it could ever become an object to us, make, as it does in Piedmont, an admirable rotation crop with rice in the northern district, while each field would contain in its ditches, water enough to rot its own product.

Indigo was, before the revolutionary war, our second great staple. The emigration of an individual, a Mr. Gray, to British India, the patronage of the British government in its cultivation there, the introduction of cotton here, just as this country was rising from the desolations of war, occasioned it to be given up; but the time has arrived for our return to its culture, and it will be soon seen that we can drive competitors out of the market, as easily in indigo as we have done in cotton, with one only precaution: that we use *pure* water in extracting the colouring matter from the plant. I now look back to the recollections of my youth with astonishment, when I remember having seen the contents of dirty puddles pumped into the steeping vats, all the mud of which was precipitated by the lime water, and mixed with, and mingled into the colouring matter. From the mountains to the sea, this whole district is calculated to produce indigo. but particularly those light sandy soils extending from the ocean back one hundred miles. The indigo now made in that quarter for domestic purposes, is the finest I ever saw.

The same region embraces a climate, which produces all the fine wines of the world. It includes the climate of Bordeaux, of Oporto, of Madeira, and of Constantia. A great portion of the country consists of a gravelly superstratum resting upon a stiff clay, and every where that a few vines have been tried, the results have exceeded all expectation. Whenever the culture is gone into, all difficulties will sink before it, and our five feet ridge husbandry will be found the best adapted to it. When the plants are headed down to four feet, as they are in France, a single stake of no great length will be sufficient between two plants, and it will be seen that grapes are as easily cultivated as cotton. It will require time, and it will require experience; but if no tariff, if no monopolies, if no exclusive rights, shall damp our enterprize, the result cannot be doubtful. Arthur Young states, that Frederick the Great, after forty years of effort, with difficulty produced in Prussia, eight thousand pounds of indifferent silk. Now you may be surprised to hear it, but the year before the revolution, there was shipped from Savannah, under the feeble efforts that had been made upon the subject, 8,000 lbs. of good silk, as I have been informed by a mercantile gentleman of that day.

The upper district of this section embraces as fine a wheat country as any I know, and furnishes, perhaps, the heaviest wheat in America. I have understood from some experienced farmers, they have known 70 lbs. per bushel. And with very bad husbandry of wheat after corn, from fifteen to twenty bushels per acre. On this subject, I think the change might be advantageous of sowing as early as the first of September, as Dr. Pallas says they do in the Crimea, where they are subject to the same evil we are, *spring blights;* and, if practicable, sowing their wheat upon their growing cotton, so as to make a kind of compound crop, as wheat and clover are in England. But we are not in the immediate field of experiment; to those who are, I consign the idea.

The olive is one of our enumerated articles, and we must say something about it. The olive grows vigorously, and without danger from frost, from Charleston in South Carolina to St. Mary's in Georgia. That it has not been more generally cultivated, has arisen from the difficulty of multiplying plants. But, as we have discovered, I conceive, a species of the wild olive, abundant along the sandy shores of our coasts, ingrafting will, I trust, overcome the difficulty, and the day be not far distant when oil will be added to the productions of our country.

Sugar has been slowly, but certainly, making its progress, and has now fixed itself in public opinion. The district is limited in which it may be cultivated to the greatest advantage; but the space is large, over which it may be grown, for the making of fine syrup, which is the most abundant and most nutritious feed for cattle that is known in the world.

If I have succeeded in extinguishing in any one bosom present, a desire to change his local situation; if I have succeeded in awakening in any one bosom present, a better opinion of his home, I shall be gratified; *for until* that *restless desire to roam,* is at an end within us, we will not call into action all our faculties, we will not tax our energies to their *maximum,* to decorate our cottage, or to improve our farm, and these things will always go together, the beautiful and the good, are both attributes of the one great monad, and cannot be separated.

The perfume of pleasure must dry the sweat upon the labourer's brow,—he will not labour, or he will sink under its pressure. It is the *moral feeling,* and *that feeling* alone, can *buoy* us up to great exertion. Then be that moral feeling strongly stamped *on you, on me, on all of us.*

And now with the feeble lights which experience or reading has afforded me, I will attempt to point out to you, what are the great leading features in every country of improvement. For we may, and will again assert, that nature operates by general means, and what is good for one, is good for many.

The first step the agriculturist ever made in improvement was the *alternation* of *his crops, the change* of *one plant* for *another,* the soil though wearied and exhausted in producing one plant, will be fresh and fruitful for some other. This truth had been proclaimed from every hill, it had been echoed through every valley. The herdsman and the hunter had marked it; they had both seen that from whatever cause the woods were destroyed, whether by fire or the axe, some new growth sprung up, but never the same. The oak gave place to the pine, or the pine gave place to the oak This beautiful lesson passed unheeded by the ploughman, or at least he was the last to observe it. At length however, he did observe it, and all the improvement of modern times have arisen from the application of this lesson to the field; for experience soon taught man, that the world of plants were divided into two great families. The one with large roots calculated to penetrate deep into the earth, and to draw from its substratum, a strong coarse nourishment, that would again shoot out large succulent and absorbent leaves, which would receive much from the atmosphere, while they shaded the soil and protected it from the sun. While they broke up the land to a great depth and ameliorated it, and these he arranged in his vocabulary as leguminous, or green, or root crops; and of this description we may place cotton, hemp, tobacco, clover, turnips, cabbages, potatoes, our running potatoes, pease, and vines of every species. The other great family of plants, are what man is principally to depend upon for his nourishment; they are what is to him as well his first great necessity, as his first luxury. These are plants with slender roots that ramify upon the surface of the soil, and elaborate from its finer parts, that nourishment which is to produce thin and slender leaves, calculated to take but little from the atmosphere, but capable of drawing much from the earth, which they leave for a great while exposed to the action of the sun, stiffened and bound together by their roots, and these the farmer knows as culmiferous, or grain, or grass crops. They are wheat and rice, rye and oats, barley and Indian corn; they are sugar cane, and all the grasses.—And it is in the skilful arrangement of these two families of plants, that all agricultural improvements must at last end. They are light, and darkness; they are bane and antidote, to each other; the one breaks up the soil, the other stiffens it; the one shades it from the sun, the other exposes it to its action. I will repeat what I say, the more strongly to impress this great agricultural truth upon your minds. That in the skilful alternation of green crops, and grain crops, the whole theory of agriculture rests; and I invite your attention to the examples which confirm it. In this immediate vicinity, the change from a rice crop to a cotton crop, alternately, has produced for many years the happiest results. Those who have omitted it have neither made good crops of cotton, or good crops of rice.

In Piedmont the greatest crops of rice ever known, have been produced by alternating them with hemp, which is a green crop. Clover, a green crop, has within fifty years, been introduced into European husbandry, for the purpose of alternating with wheat, with the greatest benefit. But a still more favourable result has followed from the introduction of the Norfolk husbandry in England, preceding wheat by turnips, a green crop.

I have on my own plantation, witnessed an improvement beyond my utmost expectations, by alternating my cane crops, with running potatoes. All the manure I have been able to apply, has fallen far short of this cheap and simple process, and hereafter it is my intention to cultivate equal quantities of these two plants, though cotton would enter well, into the alternation of cane, as plants totally dissimilar in their character and growth. I trust gentlemen I have said enough upon the alternation of crops. Every soil has upon its surface some vegetable or animal substance combined with it. The alluvia of rivers, the deposit of lakes, or the annual fall of leaves or plants; these substances when turned up, and exposed, become light and are liable to be blown away by the winds, to be washed away by the waters, or even to be exhaled by the sun. The first object then with the agriculturist should be, to preserve this precious deposit, by intermixing it with the substratum, which being sand or clay is better able to resist these external accidents. It had long been known that the spade or garden culture surpassed all other, and instead of leaving the small portions of land to which it was applied, (after continued cultivation) impoverished, left them so improved, that they became manure for other lands, yet few attempts were made to imitate or approximate to this culture.—In Flanders, it was done with the greatest success. That country where the soil was originally light, became a great portion of it, the property of religious houses, the best landlords in Europe, for they had neither executors, or minors, among them, the spade culture was introduced, and it is understood that even now, when their lands give them the heaviest crops in Europe, once in seven years, they turn over the earth two spades deep. This culture is quite too expensive for us, but we may approximate towards it by deep ploughing, or *what* is *better* by the ridge husbandry. And here let me observe that the United States are indebted to the cotton growing states for the ridge husbandry. That enlightened farmer colonel Taytor, says that by it, on a large scale, he has doubled his crops of corn in a few years.—As it is in the eastern section of these states in universal practice, I mean not to enforce it upon you, except to invite you to experiment how far it may be carried, and to urge you to make it go hand in hand with some appropriate alternation of crops.

It will not be expected, nor would it be desirable that I should go into details of agriculture to those that surround me, who are most of them at the least as well informed as I can be, but I will say something on the subject of manure, of which so much has been written, and of which so little *is known,* for the purpose of introducing one idea, taken from a writer of great merit in Mr. Skinner's paper of Baltimore, on lime. This writer says that as well from what he has seen, as from what he has read, it would seem that the barrenness of soils in the north of Europe, England and France, is to be in most instances, attributed to the too great quantity of lime or calcareous matter, while in this country barrenness is most often, attributed to the total want of it, as in our flat pine lands.

Having been at an early period of life both in England and in France, the justice of this observation was strongly impressed on my mind, for in both of these countries there are extensive regions with a substratum of chalk, which are covered over with a thin coat of grass, that the agriculturist is cautioned against breaking up, from the difficulty of ever again restoring it, yet to the eye the superstratum upon those lands looked deep enough, and well enough, to be applied to many purposes. And along our own coasts, where large masses of oyster shells have been thrown up by the Indians, and have been for a long time decomposing themselves, and operating upon the vegetable substances around them, in most instances and particularly in those instances in which the shells appear to be the oldest and most in decay, the land instead of being bettered, appears obviously to be injured by them; this can only be from the redundancy of calcareous matter of which a small portion would be highly beneficial. It would seem then, that to make a fruitful soil, a small portion of calcareous matter was essentially necessary to correct the natural acidity of *all soils,* and yet the portion required is very small. Doctor Darwin, many years since recorded an analysis of the soils of two fields, the one in Piedmont, the other in the neighbourhood of Paris, which had long been known for their extreme fertility, the base of both were sand, with some vegetable mould, and a small, but very small, portion of lime and clay in each. Sir Humphrey Davy cites the same cases, instead of doing what he might have done, given us the examination of five hundred fertile fields in England, and left us to see whether the results were in any degree the same. The writer in Mr. Skinner's paper alluded to, strongly recommends the application of lime to all our flat sandy soils, and where it can be commanded at a moderate expense of *home labour.* I should by all means recommend it, or at least recommend experiment upon the subject.

From the time of Lord Bacon, to the present period, much has been said, and more has been written, upon the pabulum or *food* of plants, each particular age, has given rise to some new theory, to some favourite menstruum, which has risen with the theory, and which has sunk with it, and at last we are left to tread the path of experiment with inquisitive but slow and cautious steps. The results of experiment as far as they have gone, would lead us to believe that almost every matter extraneous to the soil, in small quantities will aid it, but that no one substance possesses any marked superiority over others. The delusions of self-love have so powerful an influence over the human mind, that some of the wisest men have been seduced into opinions which have again through their influence spread far and wide their effects, and which many years have been scarcely able to shake. Gypsum has in the middle states, for a long time, been a universal specific. It not only found the food the plant most wanted, but it brought moisture in its train, it drew from the atmosphere the very dew of heaven. The European agriculturist who was acquainted with it, and used it in common with other substances of the same character, without noticing any extraordinary effects, was astonished to hear of its necromantic powers on this side the Atlantic, but it has had its day, and its reputation is declining, it had its accompaniment clover, and that, it is possible, gave it its first reputation. In these sentiments I know I encounter the opinion of the oldest and most venerable agriculturist of America, the friend of General Washington, and the friend of humanity, Judge Peters But this article is a costly one, and has disappointed the expectation of all who have ever tried it, either near or distant from the sea, to the South. In the general I believe we may lay it down as a *dictum*, that too much manure has been insisted upon, that a much less quantity applied at the proper time, and upon proper occasions, in our warm climate, aided by deep working and a regular rotation of crops, will do all that can be accomplished.

Gentlemen, I hope I have not exhausted your patience by these details. I have deemed them necessary, *and the more so*, because for one and twenty years past, the agriculture of our country has experienced some depression. The very elements have appeared combined, with the acts of government at home and abroad. From 1752 to 1804, we had not known a hurricane; from that time to this, we have had eight or nine gales, sufficient to destroy our crops. The year 1803, was marked by the same phenomenon that distinguished 1823. Twenty-one years have passed away amid seasons and accidents to which we were strangers; but let us turn with renovated energy, let us turn with renewed exertions, to the repairing of the past, and the improvement of the future, remembering, that when God abandoned man in paradise, to save him from despair, he plucked from Eden's bower *one flower*, and planted it in his bosom; watered by love divine, *it grew;* and *grows there still, 'tis Hope*. In every dark disastrous hour, look to this flower, for it has an amuletic power, far beyond the *Lamp of Alladdin*, far beyond *the King of Solomon.*

Darien (Geo.) May 13, 1824.

DISEASES INCIDENT TO CATTLE IN GENERAL.

Various are the maladies to which cattle are liable: and, though constant and careful examination of their health will greatly contribute to the prevention of diseases, yet it will frequently happen that they become sick, either from the effects of our variable climate, or from causes which all the vigilance of the farmer cannot possibly control. It would greatly swell the limits of the present work, were we to enumerate every malady incident to cattle: we shall therefore confine our attention to a few of those which are of most common occurrence, and for the rest can with confidence refer the farmer to Mr. Clater's useful work on the Diseases of Cattle—the result of forty years practice and experience. But it cannot be sufficiently impressed upon the owner of cattle, that in all sudden cases, it will be his real interest promptly to call in the aid of some expert cattle-doctor.

1. *Colds* are frequent attendants in the rearing of numerous animals, and are too well known to require any minute description. In these affections, as in every other malady, prevention is preferable to cure; it will, therefore, be necessary to preserve cattle from undue exposure to sudden blasts of wind, particularly from the north-east. When they become confirmed, or settle on some internal part of the body, the affected cattle may be easily discovered by the hollowness of their flanks, the roughness of their coats, the running or weeping of their eyes, and the heat of their breath. Colds prevail chiefly in the brute creation, as among mankind, in those springs which follow mild winters: and as they become contagious if long neglected, the diseased beasts should be selected as early as possible, and conveyed to a warm shelter or stable. Here they must be supplied with wholesome food; and, if the feverish symptoms increase rapidly, it will be necessary to take about two quarts of blood from the animal, except in the case of milch-kine. A warm drink, consisting of one quart of ale, with ginger, and a small portion of laudanum infused in it, should be given the beast, and the dose be repeated at the expiration of six hours. The drink ought to consist of warm water, in which nitre is dissolved; and abundance of litter should be allowed. As the animal recovers, it must be gradually exposed to the air, till it becomes sufficiently hardy to be turned out among the herd.

2. The *Colic*, or *Gripes*, may be ascertained by the restlessness of the diseased animal, which rises up and lies down almost incessantly, continually striking its head and horns against any object that occurs. Young cattle are chiefly affected by the colic; which is attended either with a *scouring*, or with *costiveness*, and which of course must be treated according to those two circumstances. In the former case, a warm draught should be given, consisting of one quart of ale mixed with a few drops of laudanum, and two or three ounces of oil of sweet almonds, or, which perhaps is preferable, with half a pint of olive oil, and sweetened with sugar. This draught is to be repeated at the end of twelve hours, or oftener, as the nature of the case may require. When the colic is accompanied with costiveness, the following purge should be given as early as possible let four, five, or six drachms of fine Barbadoes aloes, and half a pint of brandy, be mixed with two quarts of water-gruel, and be administered in a tepid, or lukewarm state. In both cases, great and speedy attention is necessary, to prevent inflammation of the intestines, which must otherwise prove fatal; the beasts should also be kept warm and dry, in order to promote perspiration.

3. *Foul*—This disease affects the feet of cattle, chiefly in consequence of hard driving, where they travel through much dirt. The part affected must be cleansed by washing, in order to discharge the offensive matter contained in the clees, or claws; after which they should be dressed with a mild digestive ointment, and kept perfectly clean from all filth, or other extraneous articles. Sometimes, however, the foul becomes *horny*, in consequence of neglect, and, though no material discharge takes place, is yet very painful; such undurations may be discovered by pressure with the hand, and must be removed with the knife, attention being paid to the directions above stated.

4. *Hoven.*—No distemper is of more frequent occurrence among cattle than that of being swollen, that is *blown*, or hoven, as it is usually denominated by farmers. It is induced either by exposure to damp situations, by too sudden removal from an inferior to a rich pasture, or by their eating too eagerly of turnips, clover, or any other succulent food; thus the stomach is loaded with food, and the process of rumination, or chewing the cud, being prevented, the animal becomes swollen with confined air, which penetrates into the stomach and intestines. Its preventive is obvious, and consists simply in turning cattle into such rich pastures only when they are not pressed by hunger, so that their appetite may be soon gratified; or they should be gently driven about for a few hours, that the dew may not only have time to evaporate, but also the animals being thus suffered to graze but a very short time at once, their stomachs will become gradually accustomed to it.

Various remedies have been tried and recommended for this malady, which, if not opportunely discovered, inevitably proves fatal. Of these, the most common is to make an incision with a penknife beneath the short ribs, when a quill, or small tube of ivory or smoothed elder, is introduced, in order to give vent to the confined air; the wound is then covered with adhesive plaster, to prevent it from being affected by the external cold, and thus the danger is in general quickly removed.

The method here noticed appears to be the result rather of absolute necessity than of mature thought, though sanctioned by custom; and, as it is liable to be attended with fatal consequences through the ignorance or inexpertness of the operator, it becomes necessary to resort to more easy remedies. Medicines indeed are seldom of any particular service, on account of the distance to which country people are often obliged to go in order to procure them; but the following recipe, (which we communicate from Mr. Young's "Annals of Agriculture," Vol. xxxiii.) being composed of simple, cheap, and common ingredients, promises to be useful. Let three quarters of a pint of olive oil, and one pint of butter, or hog's lard, be mixed together, and given to the animal by means of a horn or bottle; if no favorable change be produced in a quarter of an hour, the same quantity may be repeated. This dose is calculated for neat cattle: for sheep, when hoven or blown, a wine-glass full and a half, or two glasses, will be sufficient to be given in like manner. And it is asserted in the communication above cited, that this remedy is a specific for the malady in question, effecting a cure within the short period of half an hour. Where, however, the pen-knife is resorted to, and necessity alone can justify it, *the incision ought to be made with a small pen knife, very sharp at the point, with a sudden push,* four inches from the hip-bone, and four inches *from the edge of the loin.*

Various instruments have likewise been contrived, with the view of relieving hoven cattle, two of which merit to be particularly noticed. The first of these is a flexible, metallic tube, invented by the celebrated professor of anatomy at Edinburgh, Dr. Monro; by whom it was announced to the public in 1793. It consists of iron wire, about one-sixteenth of an inch in diameter, twisted round a polished iron rod three-eighths of an inch in diameter, in order to give it a cylindrical form; the wire, after being taken off, should be covered with soft, smooth leather. To the end of the tube, which is intended to be passed into the stomach, a brass pipe, two inches long, of the same size as, or rather larger than, the tube, is to be firmly connected; and, to prevent the tube from bending too much within the mouth or gullet, an iron wire, one-eighth of an inch in diameter, and of equal length with the tube, is placed within it, and withdrawn when such tube has entered the stomach.

Dr. Monro has found, that the distance from the fore teeth to the bottom of the first stomach of a large ox, is about six feet; the tube ought, therefore, to be six feet, or two yards in length, in order that it may operate effectually with the largest oxen. When the tube has entered the stomach, it may continue there for any length of time, as it does not impede the respiration of the animal. The greater part of the confined air will be discharged through the instrument; and, in case it should be thought necessary, the remaining condensed air, or the superfluous moisture in the stomach, may be absorbed thence, by fixing a bellows at the upper end of the tube, with two valves, one at the muzzle, the other at the side of it, and so disposed as to allow the air to pass in the direction from the stomach upwards. At the same time should it be deemed advisable to inject any ardent spirits, or other liquor calculated to check the fermentation, that operation may be performed with the utmost safety through this tube

[*Complete Grazier.*

FROM THE NEW ENGLAND FARMER.

A COMPARATIVE VIEW OF THE PROFIT, &c. OF VARIOUS VEGETABLES.

Middlesex county, Mass., July 1825.

Mr. Fessenden,

I wish you to publish the following table in your useful paper, hoping it may induce some of your correspondents who have leisure and talents, to publish a more full and correct one. The prices of many of the articles are put at what I thought they were actually worth. compared with corn at 66⅔, to give to cattle as fodder in the country. Beets and carrots are put higher than corn, according to the nutritive matter, because they contain a greater proportion of sugar than soluble matter.

With great respect, yours, B. C.

NAMES OF PERSONS AND RESIDENCE.	*Bushels per acre,...*	*Weight per bushel,*	*Pounds per acre,...*	*Nutritive matter on an acre,.......*	*Cost of manure,...*	*Labour, seed, &c...*	*Total cost,..........*	*Price per bushel,...*	*Total worth,.......*	*Profit per acre,.....*	REMARK.
1816—Justin Ely, Esq., West Springfield, raised Wheat,	50	60	3,000	2,865	$00	$00	$12	$1.50	$75	$62	
1820—Mr. Gardner Whiting, Charlestown do. Rye,	48	56	2,638	2,130	00	00	10	75	33	23	
1823—Col. Jos. Valentine, Hopkinton, do. Indian Corn,	128	60	7,680	6,374	30	25	55	67	85	30	
1821—Mr. Wm. Mears, Marblehead, do. Beans,	32	56	1,792	1,020	00	00	00	1.00	32	00	
1820—Payson Williams, Esq., Fitchburg, do. Potatoes,	614	56	34,384	7,900	37	50	87	19	117	30	
1824—Messrs. T. & H. Little, Newbury, do. Mangel Wurtzel,	133	56	74,518	10,134	00	00	00	11	146	00	
1821—E. H. Derby, Esq., Salem, do. Cabbages, *tons*	44	00	98,560	7,209	00	00	00	00	—	00	
1820—Ebn. Thrasher, Salem, do. Carrots,	849	56	47,500	4,658	00	00	00	09	76	00	
1823—Messrs. T. & H. Little, Newbury, do. Ruta Baga,	908	56	50,848	8,257	00	00	00	07	63	00	Raised as second crops.
1823—Messrs. T. & H. Little, Newbury, do. Common Turnips,	908	52	47,216	1,984	00	00	00	05	45	00	
1822—Mr. Adams Knight, Newbury, do. Onions,	651	56	36,456	- -	21	36	57	25	162	105	
1823—Mr. Silas Pearson, Newbury, do. Barley,	52	56	- -	- -	00	00	00	00	—	00	
1822—James Whitton, Esq., Lee, do. Oats,	85	00	- -	- -	00	00	00	33	28	20	
1817—Hon. John Welles, Dorchester, do. Hay, *tons*	4½	00	- -	- -	00	00	00	12	54	00	

THE ARRACACHA OF SOUTH AMERICA.

We observe by the Norfolk papers of Wednesday last, the distinguished botanist, Baron de Schack has arrived there from Trinidad, with the intention of directing his course to the north, for the purpose of introducing to our horticulturists, a knowledge of the properties of the Arracacha, and the manner of cultivating this excellent vegetable. Those who are well acquainted with its qualities describe it as one of the most useful of all vegetables in South America, its root yielding a food which is prepared in the kitchens in the same manner as potatoes. It is extremely grateful to the palate; so tender that it requires little cooking, and so easy of digestion, that it is the common practice where it is cultivated, to give it to convalescents, and persons with weak stomachs, being considered of a much less flatulent nature than potatoes.—Starch, and a variety of pastry work are made of its fecula; and reduced to a pulp, it enters the composition of certain fermented liquors, supposed to be very proper for restoring the lost tone of the stomach.

The Arracacha, though a native of Santa Fe, and other places in South America, thrives best in temperate climates. Its cultivation requires a deep black mould, and it is propagated by cutting the roots to pieces each having a separate eye or shoot, and planting these in separate holes.

At the end of three or four months, the roots are of sufficient size and quantity to be used for culinary purposes, and if allowed to remain in the ground for six months, they increase to a great bulk, without their taste being any way altered. We understand the Arracacha has undergone such experiments in Scotland as to satisfy botanists there, that it is much superior, in every respect, to the potato, which it is expected in a great measure to supersede. The potato was originally introduced into Europe from a warm climate, and has since become naturalized to the soil. In many parts of the United States, there can be no doubt the Arracacha might be cultivated with as much ease as the potato; and considering the great superiority which it is said to possess over that root, we hope that Baron de Schack will be encouraged in his endeavours to introduce it into this country. [*N. Y. E. Post.*

INDIAN MILLET.

Mr. Skinner,

I have been cutting Indian millet through this dry weather—its extraordinary growth through the drought, has induced me to send you the growth of the last forty-eight hours, (being ten inches.)

Yours, respectfully,
E. AYRE.

HORTICULTURE.

AMERICAN WINES.

Vineyard, near Georgetown, D. C., Aug. 22, 1825

John S. Skinner, Esq.

Sir,—I observe in your last American Farmer, p. 176, 1st column, a paragraph as illiberal as it is false, particularly as it respects home-made grape wine Your gooseberry, persimmon, and parsnip wine I know nothing of. But as to grape wines, if you will look over some of the volumes of *your* American Farmer, you will find that there has been wine made in the United States equal to the best wines of Europe; and no one will, or can dispute the taste, veracity, or respectability of the gentlemen whose names are to those communications.—*But both cannot be true.* And as to our capacity of supplying ourselves with home-made wine, that is, as yet, buried in the womb of time. It is very little more than forty years, since one of our most enlightened citizens and statesmen, eminent for his information, talents and integrity, did not know that *cotton* could or would be cultivated in the U. States, so as to become an article of commerce for exportation; and it is about the same length of time, since Samuel Maverick, Esq., of Montpelier, in Pendleton county, S. C., put up the first bale of cotton to be exported to England—when he was sneered at by the supercilious, and assailed by all the small wit of the vain and conceited; and even his most respectable neighbours viewed his exertions of little or no account. But cotton is now known to exceed any other article of export by millions of dollars—and the said Mr. Maverick has now the hardihood, in his old age, to plant a vineyard, and is very sanguine of its being productive; and every liberal mind must wish him success. I have correspondents from Maine to East Florida, on the sea-board, and in the states of Ohio, Kentucky and Tennessee, to the north and west, on the subject of planting vineyards and making wine—numbers of whom, in their correspondence, have referred to the American Farmer, and when an observation has been made, it has been spoken of with respect. But it does not require the gift of prophecy (if you are not more particular in your publications,) to foresee, that the Farmer will lose that high standing it now has with the public, and you will cease to be complimented as you are in this same last number of the Farmer, (see page 173, line ninth from the top,) where it is called "the fountain of agricultural truth." This insidious hit, made against home-made grape wine, will have more effect in preventing the cultivation of the vine, than columns written against it would; as it apparently appears to have the countenance of the trustees of the Maryland Agricultural Society, who ought to be (and I suppose are,) respectable for their agricultural knowledge and information. But from the few words this *libel on wine is composed of*, it can easily be remembered, and quoted by all your L. Ps. toddy makers, whiskey and grog drinkers in the country, from one end of the U. States to the other—and be the means of preventing many respectable persons from trying the experiment of planting the vine.

JOHN ADLUM.

P.S. If you should not conclude to publish this in the American Farmer, you will please to send it back to me by mail.* J. A.

[* By no means—why should it be supposed that we would not conclude to publish it? Does not the American Farmer contain every thing *American* that has been published on that subject, that is worth reading—except Major Adlum's book?

So far from the injury which Major Adlum anticipates from the effect of the *jeu d'esprit* of our correspondent, in the 22d number, it will have a contrary effect; since it has given occasion for him to denounce the opinion there advanced, that home-made wines are fit for any thing but to drink, as "illiberal and false." But much as we value good advice, given in good spirit, we must be excused from the office of censor, which we are warned to assume, so far as to deny to a correspondent the *right* to question our knowledge of the best processes of wine making, and our capacity in every way for self-supply. This would be exercising an editorial tyranny and dictatorship altogether repugnant to our feelings and principles, and by which the Farmer, in the estimation of unprejudiced and liberal minded men, would assuredly "lose the high standing which it now has" in the opinion of Major Adlum. As for "*compliments*," we do not merit, seek, or want them. More pleasure it gives us, to receive *one valuable communication*, suggesting to the American husbandman, new objects and new processes, for the profitable employment of his time and labour, written in a spirit of liberality and courteous temper, than all the compliments for which we have been indebted to the partiality of generous friends. In religion, in politicks, in science in arts, in agriculture; in every thing where there is room for difference of opinion, our motto (thank God,) is freedom of thought and inquiry: and we cannot so far limit the latitude of discussion, as to prohibit any writer from expressing, in jest or in earnest, the general opinion that home-made wines are not fit to drink. *De gustibus non est disputandum,*—Many people even yet contend, that tomatoes are only fit for hogs; and some would as soon eat fish oil as sweet oil; and the dandy, "perfumed like a milliner," would disgorge his very bowels, if he had any, at the sight of a plate full of a certain animal, of the class *amphibio*, order *reptilia*, that nightly croaks along the shores of Analoston.—Still the Haytien will eat his tomato—the Spaniard will eat his oil—and Monsieur will eat his frog, whenever he can get them. If you tell him frogs are "fit for any thing but to eat"—he will not tell you, Sare, vat you say is "illiberal and false;"—all he asks is the privilege to shrug up his shoulders, and answer "*Ah! mon cher ami—chacun a son gout.*"

The better way, according to our impression, is to leave the American Farmer as a publick forum, open for *free* discussion. Good manners will teach each disputant to deport himself with mild and gentleman-like bearing towards his opponent: thus truth will be elicited, and the publick will decide impartially. "What reason, however, have we for concealing our opinion," saith a great French writer, "when we do not give it as a law? What better than the diversity of opinions, can improve the taste of the publick?"—*Ed. Am. Farm.*]

LADIES' DEPARTMENT.

THE CULTURE OF FLOWERS.

["Behold the lilies of the field, how they grow: they toil not, neither do they spin; and yet I say unto you, that Solomon, in all his glory, was not arrayed like one of these."—Matt. ch. 6, v. 28-29.

A fondness for flowers, may be considered as characteristic of a refined and benevolent heart, as well as of a sensible and well attempered mind. The study and the culture of them will never engender any but the purest feelings of our nature; and those who have not leisure for such pursuits themselves, will still take pleasure in promoting them in others. Hence, we always question the taste and the feeling of those who complain, as we have heard some do, of their wives or daughters, that too much time is "thrown away" on flowers. Such of these as had powerful attractions for a Bacon, a Pope, a Cowper, a Sir Wm. Temple—for poets, philosophers and conquerors, cannot be unworthy of the regard and the care of American matrons and their daughters So fully are we impressed with the moral refinement associated with the love and the culture of flowers, that in passing a mansion or a garden whose windows and walls, and walks, are ornamented with vines and flowers and sweet-scented shrubs, without further observation, we should expect to find, in some fair tenant of the premises, more than common cultivation of mind, and without any doubt, more than ordinary benevolence of heart, and delicacy of sentiment.

No matter, if these attempts at floriculture be ever so rude, still they show that the spirit, the sentiment is there, under which the poet has represented Dioclesian to have answered, when ambassadors came to entice him to a throne—

> "If I, my friends," said he, "should to you show
> All the delights which in these gardens grow,
> 'Tis likelier far that you with me should stay,
> Than 'tis that you should carry me away;
> And trust me not, my friends, if every day,
> I walk not here with more delight,
> Than ever after the most happy fight,
> In triumph to the Capitol I rode
> To thank the gods, and to be thought myself almost
> a god."

When we look back to the pages of the American Farmer, we can but reproach ourselves for having gleaned for its fair readers, so little to instruct or amuse those of them (of whom, we trust, there are many,) who take delight in cultivating flowers. But we hope to retrieve what we have suffered in their esteem, so far as it can be done from the resources of our library, which, limited as it is, bears testimony to the partiality of its owner for subjects and studies suited to their taste and station in life.

Before treating of the natural history and management of any particular flower, we submit for their guidance, from the "*Portable Flower Garden*," the following GENERAL OBSERVATIONS, comprising such information as a person should have in memory, who attempts to rear plants of any kind.]

General Observations on the Culture of Flowers.

SOWING.

Where nothing is said to the contrary, it may be taken as a general rule to sow seeds, in proportion to their size, from a quarter of an inch to an inch deep. The Convolvulus, and such sized seeds in general, may be sown a quarter of an inch deep; the Lupine, &c., half an inch; the Scarlet-bean, &c., an inch deep. A few pebbles should be put at the bottom of the pot, to drain off superfluous moisture: the soil will, of course, vary according to the plant; but whatever soil the plant may require, and many require a stony one, the earth should be light and free from stones above the seeds. After sowing, a little water should be given to settle the earth about the seeds. It is not advisable for individuals to save their seeds from home-reared plants: besides that they thrive better in a change of soil, they will often be stronger from plants in the open ground.

PLANTING.

To see if a plant wants fresh potting, turn it carefully out of the pot, with the earth attached to it, and examine the roots. If they are matted about the sides and bottom of the ball, the plant evidently requires fresh potting. Then carefully reduce the ball of earth to about a third of its original bulk; single out the matted roots, and trim away all that are mouldy and decayed. Probably the same pot may then be large enough; but, if it requires a larger, it should be about two inches broader for a middle sized plant; three or four for a large plant. If the roots are not matted, but the pots are filled with the fibres, keep the ball entire, and carefully plant it in a larger pot. At the top of a large pot, an inch; of a small pot, half an inch, should be left for the reception of water, without danger of overflow. A little gravel should always be at the bottom.

A plant, newly potted, must never be exposed to a strong sun: it should be watered and placed in the shade immediately, and there remain till it is rooted: which may be known by its shooting above.

Plants are frequently destroyed by replanting, merely from the careless manner in which it is done. Where the roots spread, plenty of room should be left open, a little hillock made in the centre of the pot, and the plant being placed thereon, the roots should be distributed around it in a regular manner, observing that they are not twisted or turned up at the ends. The earth should be filled in, a little at a time, and the pot gently shaken, to settle the earth to the roots all the way down. When filled, it should be pressed down with the hand. It is very common to fill in the earth at once, and press it hard down; which not only wounds the tender fibres, but often leaves a hollow space towards the bottom of the roots, and deprives them of their proper nourishment. But the thing most necessary to be observed is, *that the roots be allowed their natural course.*

All plants should be kept clear of weeds, not for neatness alone, but because they exhaust the nutriment which feeds the plant.

WATER.

The best water for plants is undoubtedly rain-water; if this cannot be obtained, river-water will do: pond-water is not so good; but the worst of all is hard spring water. In winter, and, for delicate plants, even in summer, water should be placed in the sun till it becomes tepid before it is used.

The water should never be allowed to remain in the pan under the pot; it tends to rot the roots. It may be well to observe that plants should be watered with a rose on the spout of the watering pot; and the more finely it is perforated the better, so as to sprinkle the water lightly over the flowers and leaves, without bending them down with its weight.

Many persons think it sufficient to water the roots, which is a great mistake; it materially contributes to their health and beauty to sprinkle the whole plant. Bathing the feet will neither cleanse the hands, nor freshen the bloom of the cheeks. The Auricula, however, is one of those ladies of fashion, who, fearful of injuring the delicacy of their complexions by the use of water, cleanse their faces with some elegant powder as a substitute for that rude element. There is a farina in the flower of the Auricula, which is usually esteemed its principal beauty: this is the case with the Polyanthus also, and some few others, of which the blossoms must not be watered.

Of such plants as are succulent, it is generally advised to water the leaves but seldom, lest a redundancy of moisture should rot them: the merely plucking a leaf, will generally determine whether a plant be succulent or not; and a person may distinguish in a moment what blossoms are likely to be hurt by water, by observing whether there be any visible farina on them. The best way in watering all plants, is rather to cast the water at, than to pour it on them, as it falls more lightly. It will be observed, that more water, as well as more shelter, must be necessary for potted plants, than for plants in the open ground.

AIR AND LIGHT.

Flowers must not be denied the light, towards which they naturally turn; the want of it will injure their health, as much as the want of water, air, or warmth.

They must also be allowed air: even those that will not bear the outer air, must have the air of the room frequently freshened by ventilation, to preserve them in health. Care should be taken not to let plants stand in a draught; for, so situated, one strong gust of an easterly wind will often prove sufficient to destroy them.

In frosty weather the windows should be kept close, and at night the shutters. Those plants directed to be placed in an inhabited room, will not usually require a fire, if in a room which has had fire in the day; but in sharp frost it will be well, instead of stirring out the fire, to leave a little, on retiring to rest, and place a guard before it for security.

INSECTS.

If any plants are infested with insects, which is often the case with Rose-trees, Heart's-ease, &c., they should be watered with tobacco water, which quickly destroys them. Some say that, independently of the removal of the insects, it improves the verdure of the plant.

One pound of roll tobacco will suffice for three pints of water, which should be poured on it nearly boiling, and stand a few hours before it is used.

BULBS.

The leaves of bulbous flowers should never be plucked before they decay, or the bulb will thereby be deprived of a large portion of its natural nourishment. When the flowers and leaves have decayed, the bulbs should be taken up, dried in the shade, all loose earth, fibres, &c., should be cleaned off them, and they should be put away in a dry place, and safe from mice, &c., until wanted. They should not touch each other, but either lie all on a flat surface, or be kept apart by some dry sand. Bulbs should have no fresh water after their leaves have begun to decay.

Some persons put a piece of nitre, of the size of a pea, into the water in which the bulbs are raised, renewing it whenever the water is changed, in order to make the colours brighter. It may not be known to every one who finds amusement in the cultivation of flowers, that pots are made purposely for bulbs a wide at the bottom as at the top, and of the requisite depth. When they are grown in earth, it is advisable to procure these pots; for of the common kind they cannot be obtained sufficiently deep without being much wider than necessary.

FINE FRUIT.

[Finer fruit was never seen in any country than that which accompanied the following.]

Dear Sir, *Oxford, Aug.* 18, 1825.

I send you this morning by the steamboat, Captain Dickinson, a basket of assorted fruits, and beg your opinion of them. Amongst the rest you will find several sorts of my new French peaches, of which some are ripe and some not quite. My largest sorts are not ripe, and in fact, the hard storms blew off the very largest. You will receive some of the

1. Large early Newingtons.
2. Large French pears—perhaps not excelled by any.
3. Large musk burgami, or bergamot.
4. Small French peach, name not known, much perfumed.

The above are all the sorts ripe at this time, the grapes are the white Constantia. With the addition of about four more sorts of peaches which I have propagated, I have about two hundred trees for sale; and many of them bore fruit this year. I have also as many fine plums of the imported sorts for sale, and a great number of pears, &c. &c.

Your friend, &c.
JOHN WILLIS.

P. S. I have had a French muscatory peach 12 *inches round, measure any way.*

MISCELLANEOUS.

EXTRACTS

"From Lawson's History of 'The Carolinas,' published in London, in the year 1706."

Mr. Skinner,

Sir.—I send you another extract from "*Lawson,*" and as I intend to *extract* "the strictly practical parts" only, I hope it may meet your views, and be useful to the vine growing part of the community. ☞The whole essay is very interesting! but I mean to keep my eye on the practical parts alone!—Lawson says, (page 113.)

"The trimming of *vines* as they do in France, that is to a stump, must either here not be followed, or we are not sensible of the exact time, when they ought to be thus pruned: for experience has taught us that the European grape suffered to run and expand itself at large, has been found to bear as well in America as it does in Europe; when at the same time, the same root of vine trimmed to a *stump!* as before spoken of, has borne a poor crop for one year or two; and by its spilling after cutting, emaciated, and in three or four years died!

"This experiment I believe has never failed, for I have trimmed the *natural vine* the French way—which has been attended at last with the same fate. Wherefore, it seems most expedient, to leave the *vines* more branches here than in Europe; or, let them run up trees as some do in 'Lombardy,' upon elms. The mulberries and chinkapin are tough—and trimmed to what you please, therefore, fit supporters of the vines. Eelding, and plucking away the *leaves,* to hasten the ripening of this fruit, may not be unnecessary—yet we see the natural 'wild grape,' generally ripens in the *shade.* Nature in this as in many other instances, may prove a sure *guide!* The twisting of the stems to make the grapes ripe, together, loses no juice, and may be beneficial if done in season.

"A very ingenious French gentleman, and another from 'Switzerland.' with whom I frequently converse, exclaim against that short cutting of *vines*—the *generally* approved method of France and Germany; and say, that they were both out in their judgment, until of late experience has taught them otherwise. Moreover, the French in North Carolina assure me, that if we should trim our apple and other fruit trees, as they do in Europe, we should spoil them! As for apples and plums, I have found by experience what they affirm to be true. The French from the 'Manakin Town,' on the freshes of *James river,* had for the most part removed themselves to Carolina, to live there before I came away, and the rest were following, as their minister, (Monsieur Philip de Riebourg) told me, who was at 'Bath town,' where I was taking my leave of my friends. He assured me that their intent was to propagate vines as far as their present *circumstances* would permit—provided they could get any *slips* of vines that would do. At the same time I had got some grape seed which were of the 'Jesuit's white grape,' from Madeira. The seed came up very plentifully, and I hope will not degenerate; which if it so happens not to do, the seed may prove the best way to raise a 'vineyard,' as certainly it is most easy for transplantation Yet I reckon we should have the 'seed' from a country where the *grape* arrives at the utmost perfection of ripeness!"

The following gives an *insight* into the discovery of the great Virginia *coal mines.*

"One of these French, being a fowling, shot a fowl in the river, (*James.*) upon which his dog went down the banks to bring it to his master; but the bank was so high and steep that he could not get up again. Hereupon the Frenchman went down to help his dog up, and breaking the mould away accidentally with his feet, he discovered a very rich 'coal mine.' This adventure he gave an account of among the neighbourhood, and presently one of the gentry of that part surveyed the land, and the poor Frenchman got nothing by his discovery."☞The Manakin Town was upon James river, at the falls, where Richmond now stands—was it not?

Your steady subscriber.
Caroliniensis.

CULTURE OF TREES.

Mr. Skinner,

Sir,—As the season for planting fruit and ornamental trees and shrubs, is fast approaching, I wish to draw the public attention to the best source in the United States, from whence a certain supply may be obtained.

Mr. William Prince, of Flushing, Long Island, state of New-York, is the owner and manager of the most extensive garden on this continent, and which under the care of himself and his father, has been in operation more than sixty years.

For the last thirty years, I have been acquainted with Mr. Prince and his garden, in which I spent a few hours the last summer; and for the last twenty-seven years, I have been annually procuring from him the choicest fruits and the most beautiful trees and shrubs.

His catalogue is not confined to homely articles, he has for sale, a most splendid collection of green and hot-house plants. I most sincerely recommend Mr. Prince to your notice, as a gentleman every way worthy of public patronage, and who I know may be relied upon. His collection is immense, which he spares neither time, labour, or money to increase.

His importations this year, of new varieties of fruit trees, shrubs, &c. from the various nurseries of Europe, have cost him more than three thousand dollars, and in this collection, he has received more than 400 new varieties of fruit, enabling him to accommodate the climate and soil of every section of our union. In the single article of roses, he has from 3 to 400 varieties.

Indeed his collection is immense, and of fruits, every thing having a good name. But here let me observe that fine and good names, do not always insure good fruits, because climate and soil may change the quality, and we may not all agree to give the same name to the same fruit. Let an old man confess one great error among a few thousand which shall be nameless.

I began in the year 1783, to propagate fruit, by grafting and budding; there was but little good fruit in our country, a solitary pear or apple was thought good, because there was not any better. I lost therefore many years of my life by propagating fruit, which, since better experience, I know to be worthless, and have dug up, or headed down most of them. My great error was, in not procuring at any price from a nursery of highest reputation, a few dollars worth of choice apples, pears, cherries, peaches, plumbs, &c. &c. From a collection made in this way, I should have ascertained those which were excellent on my farm, from which I could have propagated, and I should have been in almost the immediate enjoyment of delicious fruit. The best peach which I own, is a fine healthy tree, procured from Mr. Prince in March 1798.

All deciduous trees, should in Maryland, be planted not later if possible than the last of October, of course, orders cannot be too sooo sent on. Mr. Prince, has agents in almost every sea port town of our union, but he will respect an order, to be consigned to any respectable merchant. Evergreens, of which Mr. Prince has a splendid collection, should be planted in March, to the last of April. Direct to Mr. William Prince, Flushing, Long Island, New York Your ob t. serv t. F

August 23, 1825.

SUMACH.

FOR THE AMERICAN FARMER.

West-Chester, (Pa.) Aug. 24, 1825.

Mr. Skinner,

A writer, signed "*Hopson,*" whom you quote from the N. Y. Statesman, on the subject of the genus *Rhus,* or Sumach, and the use made of it, in tanning, &c. (see American Farmer, Aug. 12,) seems to suppose that the *rhus coriaria* or elm leaved sumach, is a native of the United States. This, I apprehend, is a mistake. No American botanist, that I know of, has ever found the rhus coriaria, growing native in our country. Indeed, it is a rare plant in our botanic gardens. The species of rhus which are collected and used for tanning morocco leather, in this country, are chiefly, I believe, the *R. glabrum,* or common smooth sumach, and the *R. typhinum,* or Stag's horn sumach. That they are inferior to the sumach "obtained from Spain and Sicily," as "Hopson" states, is quite prubable: and hence it is important, in case our southern fellow citizens should undertake the culture of sumach, that they should be apprized of the error of "Hopson," in supposing the *rhus coriaria* to be a native. They ought certainly to procure that species which has been found most valuable; viz: *R. coriaria*—and for this they must look abroad. It is simply to notice what I believe to be an error, that I trouble you with this paragraph and am your obt. servant. W. D.

PEACHES.

Notwithstanding the hint we gave our Philadelphia friends on the subject of this delicious fruit, they have, as yet, afforded but a small supply of peaches to our city—and in proof of this remark, we mention that good peaches were on Saturday rapidly sold at the enormous price of *twelve* dollars the bushel; second quality, at *ten* dollars.

[*New York paper.*

[Best yellow cling-stone peaches, for preserving, are selling in the Baltimore market for *five* dollars per bushel.]

PAPER FROM STRAW.

M. Louis Lambert, of Paris, has taken out a patent in England, for the manufacture of Paper from Straw. He thus describes the operation:—

"My said secret or invention consists in the employment of Straw, which I prefer to free from knots, by cutting them off the stems: I next submit the Straw to ebullition, with quick lime in water, in the proportion of four ounces of lime to one of water, to extract the colouring matters, and to dispose it to become fibrous; I can also employ for the same purposes, caustic potash, soda or ammonia, it is then washed—I next expose it to the action of a hydrosulphuret, composed of quick-lime and sulphur, in solution, in the proportions of four ounces of lime to one of sulphur, with one quart of water, in order to free it from the mucilaginous and silicious matters, so prejudicial in paper-making. I then wash it thoroughly in successive portions of water, by exposing it to the action of the paper-mill, till all smell of the alkaline sulphuret is entirely removed—I then press it, and afterwards submit it to the usual operations employed in bleaching vegetable fibres, viz:—to the action of chlorine, either separate or in combination with lime, or by exposure to the open air and light upon the grass. After this, it is well washed, till all the smell of bleaching is withdrawn; and, lastly, it is exposed to the action of the rag-engines, usually used in paper-making, in order to reduce it into pulp or paste, previous to being made into paper." [*Technical Repository, No. 42.*

The extraordinary and important increase of the Cotton trade, now established in various parts of the Kingdom may be accurately shewn in the following account of the annual *Importation of Cotton* into Great Britain, from 1781 to 1822, viz:

1781	5,101,920 lbs.
1783	9,546,179
1785	17,992,888
1787	22,600,000
1799	46,000,000
1800	56,010,732
1802	60,345,600
1807	74,025,306
1811	91,662,344
1815	99,306,343
1817	124,912,968
1818	177,282,158
1819	149,549,971
1820	150,043,082
1821	141,253,993

In 1801, the official value of the Cotton *Twist* and Yarn *exported* from Great Britain was 476,106*l.* the official value of *cotton goods* exported was 6,715,210*l.*

In 1822 the quantity of twist and yarn exported (weighing 28,531,660 lbs.) was 2,522,499*l.* of cotton goods exported 24,815,276*l.*

ADVANTAGES OF PEDESTRIANISM.

I ride and walk, and am reputed the best *walker* in this town.—Swift.

The wise for cure on *exercise* depend:
God never made his work for man to mend.—Dryden.

The proper exercise of the body, so conducive to good health and spirits, is an important object to every one. By a strict attention to exercise, the tone and vigour of the moving powers are wonderfully increased; the nervous energy and circulation of the blood are materially accelerated; and this increased impetus of the blood through the whole system produces an effectual determination to the surface of the skin; and free perspiration is the consequence. By the same means, the body is disposed to sleep; the appetite increased; the tone of the stomach and digestive powers preserved; and the blood is determined from the internal viscera, which prevents as well as removes obstructions, and powerfully obviates the tendency to a plethoric fulness of the system. By exercise, the spirits are enlivened, and the body refreshed; or, as Hippocrates observes, exercise gives strength to the body, and vigour to the mind; and it is an irrefragable truth, that where it is improperly neglected, the energy and strength of the whole machine falls to decay.

Pedestrianism affords the best species of exercise, and may be said to include much that is valuable to mankind. Those distinguished persons, therefore, who have rendered this branch of the gymnastic art fashionable and general, deserve the highest praise. To Captain Barclay, and many other gentlemen, this country is greatly indebted for their improvement of the art. It is only the thoughtless and inconsiderate who do not discover the benefits resulting from the exploits of such celebrated professors, because they cannot estimate the ultimate consequences of individual exertion. But reflecting people must perceive that, in time, desultory efforts may be reduced into a system founded on principles calculated to strengthen and preserve both the health of our bodies and the energy of our minds, thus facilitating the acquisition of human knowledge.

Exercise on foot is allowed to be the most natural and perfect, as it employs every part of the body, and effectually promotes the circulation of the blood through the arteries and veins. "Walking," says Dr. Willich, "the most natural and salutary exercise, is in the power of every body; and we can adapt its degree and duration to the various circumstances of health. By this exercise the appetite and perspiration are promoted; the body is kept in proper temperament; the mind is enlivened; the motion of the lungs is facilitated; and the rigidity of the legs, arising from too much sitting is relieved. The most obstinate diseases, and the most troublesome hysteric and hypochondriacal complaints have been frequently cured by perseverance in walking."

Pedestrian feats, even when carried to excess, are seldom attended with any pernicious effects. The exhaustion occasioned by severe exercise is only temporary; for the wearied frame is speedily recruited by the luxury of rest and refreshment. But certain rules may be observed, which will render walking both easy and agreeable. A light, yet firm and manly step, an erect posture, especially in regard to the head, the breast, and the shoulders, should be the chief objects of attainment. By care and attention a person may thus learn to walk gracefully, and with little bodily fatigue.

Early and constant practice gradually forms the pedestrian for the accomplishment of the greatest undertakings; but even in the common intercourse subsisting in society, facility of walking is requisite for individual conveniency and comfort. It should, therefore, be the study of people of all ranks, to adopt the best method of performing either short or long journeys, by imitating the *gait* and *manner* of those celebrated men, who, of late years, have so eminently distinguished themselves in the annals of the sporting world. [*Annals of Sporting.*

REMARKABLY FINE OX.

On Monday, the 28th of January, was slaughtered at Ellel Hall, near Lancaster, the famous grey ox, of the short-horned breed, belonging to Wm. Hinde, Esq., of the firm of Hinde & Patchett, of Leeds; which, although he would not have been 5 years old till the 25th of March next, was of the following extraordinary weight: Nett weight of the carcass 2048 lbs., or 512 lbs. per quarter; loose fat, 21 st. 11 lb., of 16 lbs. to the stone, (347 lbs.;) hide, 149 lbs.; head and tongue, 59 lbs.; and we understand that a sirloin draft, weighing 132 lbs. was presented to Sir Thomas D. Hesketh, bart., of Rufford Hall. This fine animal was pastured during the summer, and in winter fed on hay, crushed oats and turnips.—*ib.*

ENGLISH BULL-DOG.

A large dog of this species, from some cause that was not observed, suddenly flew at a fine cart-horse, that was standing at the end of the Salthouse Dock, Liverpool, and fixing his lacerating teeth in his shoulder, defied every effort to get him off. At first he was beaten with cart whips and sticks with such fury as seemed enough to break his bones; but this being unavailing, a carpenter came up with an adze in his hand, and beat him with the blunt iron head of the instrument till it might have been thought he had pounded him to a jelly, but the dog never moved a tooth. A man then took out a large pointed clasp-knife, with which he stabbed him repeatedly in the back, loins, and ribs, but with no better success. At last, one of the spectators who happened to possess more strength of sinew and arm, squeezed the ferocious animal so tightly round the throat, that at length he turned up the whites of his eyes, and relaxed his jaws. The man threw him off to a distance; but the dog immediately went round the crowd, got behind the horse, and again seized it by the under part of his thigh. As no terms could be kept with this untameable brute, he was again loosened, and thrown into the dock to drown; as he rose to the surface, a sailor struck him a deadly blow on the head with a handspike, but he rose once more, and was again sent down in the same manner, and this process was repeated five or six times; at length, one of the by-standers, who either possessed, or assumed to have some right of property in the dog, overcome by his amazing tenacity of life, and weary of persecution, got him out, and walked off with this prodigy of English courage, to all appearance very little the worse for the horrible conflict he had undergone.—*ib.*

THE FARMER.

Baltimore, Friday, September 2, 1825.

PREMIUMS FOR THE BEST CULTIVATED FARMS.

The Maryland Agricultural Society, has offered a premium of a piece of plate valued at $50, "for the farm of not less than one hundred acres, which shall appear to have been cultivated with the greatest economy and nett profit, consistently with its permanent improvement: reference being had to its natural advantages as to soil, situation, &c.

For the second best, particulars as above, a premium of a piece of plate valued at $30.

In order that every farmer and planter in Maryland, may have an equal opportunity of entering into competition; the trustees have appointed three gentlemen in each county of the state, to examine and report the applications for the above premiums, in their respective counties.

The trustees rely on the known zeal and devotion to the cause of agriculture, of the gentlemen whom they have taken the liberty to place on these committees. If however, any of these gentlemen cannot act; it is expected that each person declining the trust will prevail on some other in his county to supply his place, and will inform the corresponding secretary of the change.

The duty required of these committees, will be, to receive the applications of those who wish to offer their farms for the premiums; to view the farms of the applicants; to obtain from each a statement as accurate as practicable, of the size of his farm, the quantity of different manures used, his kinds of crop, the quantity of each; the number of hands, horses, mules, and oxen employed; the number of cattle, sheep, and hogs kept, raised and sold, and their produce in milk, butter, cheese, wool, &c.

At some convenient time, the committees can meet, compare the different farms they have examined, and select the two which they consider the best in their respective counties. A particular account of each of these may then be transmitted to the corresponding secretary at any time previous to the next Cattle Show. At the Cattle Show, the Trustees will select three gentlemen from among the members of the committees attending, to whom the corresponding secretary will deliver all the reports he has received; these three gentlemen will compare the different statements, and will award the premiums to the persons whom they think entitled.

In compliance with a resolution passed by the Board of Trustees, at their last meeting, the following gentlemen have been appointed on the committees.

Allegany Co.—J. M'Henry, David Lynn, William Lamar. *Washington*—Frisby Tilghman, W. Gabby, John Bowles. *Frederick*—Grafton Duval, Baker Johnson, John Lee. *Anne Arundel*—T. B. Dorsey, Henry Wayman, Col. Thomas Hood. *Montgomery*—Arch. Lee, Geo. C. Washington, Roger Brooke. *P. George*—Jos. Kent, Benj. Ogle, R. W. Bowie. *Calvert*—Daniel Kent, John Beckett, Richard Graham. *Charles*—Daniel Jenifer, John B. Wills, John Ferguson. *St. Mary's*—H. G. S. Key, Clem. Dorsey, Dr. James Thomas. *Baltimore*—Thomas Gist, John S. Webster, John Kelso. *Harford*—Dr. Jos. Brownley, John Stump, Wm. M. Lansdale. *Cecil*—J. W. Thomas, S. Hollingsworth, jr. B. F. Mackall. *Kent*—Gen. Reed, Ezekiel F. Chambers, G. W. Thomas. *Queen Ann's*—Col. T. Emory, W. R. Stewart, Wm De Courcey. *Talbot*—R. H. Goldsborough, S. Stevens, Tench Tilghman. *Caroline*—Col. Potter, Richard Hughlett, Wm. Orrell. *Somerset*—Dr. James Wilson, Littleton Dennis, Arnold E. Jones. *Dorset*—Dr. Muse, Washington Eccleston, Charles Goldsborough. *Worcester*—Dr. Spence, Thomas N. Williams, Col. G. Haywood.

By order of the Board of Trustees,
JOHN S. SKINNER,
Correspond'g Sec'ry.

(From a Charleston Paper.)

Gen. Charles Cotesworth Pinckney.—At a special meeting of the South Carolina Agricultural Society, held on Monday, 22d of August, the following Address and Resolutions were unanimously adopted:

Mr. President—To praise those, when dead, whom we have loved and venerated when living, is a feeling as delightful to indulge, as it is difficult to repress. To eulogize departed worth, is the only return which the obligated living can make to the illustrious dead. If ever there was an occasion, when men could with perfect propriety, lavish the highest encomiums, and pay the most devotional respect, to the memory of a benefactor, surely this is one, which has this day assembled us, to express our admiration of the character, and our poignant regret for the death of the venerable Maj. Gen. *Charles Cotesworth Pinckney*. Poor, indeed, if that was the only reward, would be the compensation of our ceaseless applause, for his many painful and perilous exertions, for his long life of spotless purity, of unsullied patriotism. But fortunately for mankind, with the truly great, their glory is rather the consequence, than the inspiring cause of their distinguished actions; and hence from the moral constitution of human nature, they enjoy from every hour's reflection, that calm, dignified and exalted happiness, which far excels the admiration of the world. To history, we must leave the recital and enumeration of his many meritorious actions, as to her province, belong the characters of those "who were born, and have acted as if they were born, for their country and mankind." Our Society feels in the death of our invaluable member the loss of a distinguished patron and zealous friend of agriculture. Believing that the power, prosperity and happiness of his native state, were unalterably associated with the extent, activity and permanency of her agricultural resources, he steadily devoted to their developement all the energies of his mind. He seemed, in his solicitude, to embrace all the subjects connected with agriculture, which he wished to be followed as a scientific, as well as practical pursuit. Not content to recline upon the honours of his youth, or live on the exhaustless fame of his manhood, he sought in the decline of his life, to encourage and promote the views of all the societies whose objects were public good, or private happiness. His patriotism was illustrated by his never ceasing to be useful. He always pursued a right course, from right feeling, and his glory may be equally shared between his head and his heart. The fame of his exploits was as far above the reach of envy, as his motives were devoid of selfishness. Nature kindly extended his life, that he might witness the happy results of his labour, and as kindly removed him when the circle of his glory was complete. The whole map of his life is now before us, and from the earliest period of his valourous youth, to the day of his lamented death, we can trace nothing to regret, but much to imitate and more to admire. Accident can no longer exercise its tyranny over his reputation—his fame is fixed on earth—his happiness secured in Heaven.

In consequence of the irreparable loss which has befallen our Society by the death of one of its most estimable and distinguished members, who was the friend of science and the friend of man, I beg leave to offer the following resolutions:

1. *Resolved*, That the members of the South Carolina Agricultural Society do wear the usual mourning for thirty days, for Gen. Charles Cotesworth Pinckney, as the last means of expressing their great veneration for his public character, and their personal respect for his private worth.

2. *Resolved*, That our proceedings in relation to the late melancholy event which has clad our city in mourning, be transmitted to the daughters of the deceased, not only from a hope that sympathy may alleviate sorrow, but with the view of informing them how highly the life of their venerable father was valued, and how sincerely his death was deplored by the members of the South Carolina Agricultural Society.

3. *Resolved*, That they be also published in the newspapers of this city.

CHARLES E. ROWAND, Sec'ry.

Tobacco.—Amount of Inspections in the three state warehouses, during the last week, 510 hhds.

CONTENTS OF THIS NUMBER.

Union Agricultural Society of Georgia, Address of Thomas Spalding, President—Diseases incident to Cattle in general—A Comparative View of the Profit, &c. of various Vegetables—The Arracacha of South America—Indian Millet—American Wines, Letter from Mr. Adlum—General Observations on the Culture of Flowers—Fine Fruit, from Mr. John Willis—Extracts from Lawson's History of the Carolinas—Culture of Trees, Mr. Prince's Nursery—Sumach, the best for culture—Peaches, high price of in New York—Cotton Trade in Great Britain—Advantages of Pedestrianism—Remarkably fine Ox—English Bull Dog—Premiums for the best cultivated Farms, offered by the Maryland Agricultural Society—Death of Gen. Charles Cotesworth Pinckney—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	10			
BACON, and Hams, . .	lb.	7		10	
COFFEE, W.I. Green, .	—	18	19	20	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	24	25		
Georgia Upland, . . .	—	20	22		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18	—				
CANDLES, Mould, . .	—	11	13	14	18
Dipt, ...	—	10			12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	33	35		
FISH, Herrings, Sus.	bbl.	2 18		2 37	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 75	5 00		
Fine, ...	—	4 25	4 37		
Susquehanna, superfi.	—	4 38	4 62		
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5	5 50		
GRAIN, Indian Corn, .	bush	43	46		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	90	94		
do. Red, ...	—	85	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	40			
Barley, ...	—	50			
Clover Seed, Red . .	—	3 75		4	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		25	
Peas, Black Eyed, . .	—	95	1		
Beans White, ...	—	1	1 12		
HEMP, Russia, clean, .	ton	170			
HOGS' LARD, ...	lb.	10	11		
LEATHER, Soal, best,	—	24	28		
Eastern Tan, ...	—	18	20		
MOLASSES, Havana, .	gal.	26	30	37	50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	7		7½	9
NAVAL STORES, Tar,	bbl.	2 25	2 50		
Pitch, ...	—	1 75	2 00		
Turpentine, Soft, . .	—	2	2 12		
OIL, Whale, common, .	gal.	24	26		
Linseed, ...	—	80			
PORK, Baltimore Mess,	bbl	15	15 50		
do. Prime, . . .	—	11 50			
PLASTER, cargo price,	ton.	4 00	4 25		
POTATOES, ...	bush	62	75		
RICE, fresh, ...	c.lb.	3 25	3 50		
SOAP, Baltimore White,	lb.	10	14	18	
do. Brown, .	—	6	8	9	10
WHISKEY, 1st proof, .	gal.	26			
PEACH BRANDY, 4th pr	—	75	1 00		
APPLE BRANDY, 1st pr	—	30	31		
SUGARS, Havana White,	c.lb.	13 00	14 00		
do. Brown, . .	—	11 00	11 50		
Louisiana, ...	—	8 50	11 00		
Loaf, ...	lb.	15	24	15	25
Lump, ...	—	15	16	16	17
SPICES, Cloves, ...	—	85			
Ginger, Ground, . . .	—	7	8		
Nutmegs, ...	—	1 75		2 00	
Pepper, ...	—	17		18	
SALT, St. Ubes, ...	bush	40			
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	8 50		9	
WINES, Madeira, L. P.	gal.	2 50	2 70	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	4	3		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	40	45	unwashed, but free of tags.	
do. crossed, . .	—	30	35		
Common, Country, .	—	25	28		
Skinners' or Pulled, .	—	30	35		

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AGRICULTURE.

ON THE IMPROVEMENT OF OUR BREED OF HORNED CATTLE BY IMPORTATION.

(From the Massachusetts Agricultural Journal.)

We are induced to say something on this subject, not only because we think it an important one, but because some very able and interesting remarks have been made upon it by the venerable President of the Essex Agricultural Society.

In the course of his remarks and quotations, he has been pleased to refer to the editors of this journal, or at least to one of them, and he has cited passages, which might lead readers to infer that we entertain the opinion, that little benefit will be derived from importing the improved races of Great Britain, (at least such might be the inference drawn from them.) It is probable, also, that most persons who may read the essays of Col. Pickering, will believe that he is of opinion, that these importations of foreign stock are of little importance, and of course, that the attempt to cross the imported animals with our own stock, is nearly useless labour and expense.

Such is the general effect of the remarks, and such, we think, will be the impression; and as his weight of character and great opportunities both of reading the most approved books on this topic, and of seeing various descriptions of cattle in all parts of the United States, justly entitle him to a great share of public confidence, we think it a duty we owe to the public, to state our own views upon the subject. We are not opposed to what we believe to be Col. Pickering's opinions. We coincide with him in the greater part of them, but we think the tendency of his essays is to discourage the attempt to improve our own breeds by foreign crosses, and this *tendency* we regret, and shall give our reasons for regretting it.

We begin then by saying, that we presume our ancestors very early ceased the importation of cattle from England. The ships were small, crowded with passengers and their effects; the passages long, the transport expensive, and we assume it as probable, that few cattle, if any, were imported after 1650.

It is well known that the agriculture of England was then in a low state, compared with its present condition. Successions of crops were nearly unknown; root crops for winter fodder were we believe, entirely so. The prices of cattle were small; no great encouragement had been given to improve the breed. It is probable, therefore, that the cattle imported were not of a very improved race.

On the other hand, there can be no doubt that our climate and pastures are well adapted to the preservation of cattle in as good a state as when imported, and rather to improve them. This we infer from the *fact,* that they are so fine, rather than from any general reasoning derived from our climate and soil, and still less from our treatment of them. If we regarded those only, we should say, that the heat of our summers, and length and severity of our winters, were unfavourable to an animal impatient of great heat and severe cold, and thriving much better on green succulent food than on dry meadow hay. In a short excursion made this spring into the country, we found the cows turned out to very short pastures, (on the 18th of May,) thin, feeble, and in every respect miserable. We speak of the great mass of them: and we understand the common practice to be, to feed the cows on meadow hay, reserving the more substantial food for their working cattle and horses.

Now it does not seem to us possible, that we can have materially improved our horned cattle since we imported them; that we have preserved them so perfect as they are in Vermont, in Hampshire and Worcester counties of Massachusetts, is rather a matter of some surprise, proving, we think clearly, that a little more care in providing against the cold of winter, and its impoverishing diet, would enable us to surpass Great Britain in this important article of husbandry.

As the agriculture of Great Britain has gone on daily and regularly in an improving course, ever since the middle of the seventeenth century, and more especially since the middle of the last century, while our's has continued stationary, or even retrograde, till within the last fifty years, it would naturally be expected, that their race of horned cattle would gradually improve, and more especially since their opulent farmers have devoted their attention to their improvement. The spirit of rivalship, the great prices paid for more than fifty years for fine bulls and cows, must have had this effect.

Let us take an example which is more easily examined, because it is much more obvious—their races of sheep. Surely it will not be questioned, that the Dishley, or New Leicester race of sheep, are far superior to any which we raise, the merino, an imported race, alone excepted, (on account of its fine fleece.) We have no good race of native sheep, and we have no sheep to compare with those of Great Britain. Why is this so? Possibly because the perpetual verdure of England is more favourable to the propagation of sheep; but we think that it is principally owing to neglect on our part.

The same thing is true with respect to swine.—The Bedford, a spotted race, first introduced into Massachusetts by Col. Pickering is far superior to any one which we before possessed. Since the introduction of these, there have been other breeds introduced, which, so far as we can judge by description and by prints, are the race called in England the Berkshire, or perhaps crossed with the Chinese, which for aptitude for fattening, and for profit, are far superior to our old, long-legged race, who consumed the farmer, as well as the fruits of his industry.

We believe, and we believe because we have seen, that the horned cattle of Great Britain are, as a whole body, superior to our own. If Col. Pickering should pass a six week's tour in England, he would feel as we do, that it is not a question to be discussed, but a point settled. Twenty-two years since we spent a twelve-month in that country.—We shall say nothing of the shows of cattle at the Smithfield club celebration—nothing of the Lewes show of cattle. We admit, that when dukes and marquises, with incomes of 500,000 dollars, are patrons and competitors, animals may be produced of *any* form, and of *any* reasonable dimensions.—Money and care will put flesh in any quantity, and on the most profitable parts of any animal of good form. We shall, therefore, omit any reference to their cattle shows as compared with our own. Any picture of them (however true in itself,) would appear to be as exaggerated, as an attempt to give an idea of the confluence of passengers, and the extent and vastness of London would be to an inhabitant of the thriving town of Worcester. It is not a thing to be described. It can only be half understood by seeing it, for the mind is so bewildered and lost, that it loses at least half its powers of perception.

We say nothing, therefore, of the professed exhibitions of rare animals; but this we do say, that when we travel through England, we find ourselves among a race of improved horned cattle, nearly every one of which we *covet.* Let Mr. Marshall or Mr. Young (old writers,) say what they will, nothing can destroy the effect of ocular demonstration. The cattle of England are far superior to our own as a body, and it is not precisely correct to compare individual exceptions in our country with general and average statements in whole counties in England. We are sorry to say further, that the cattle of the low countries and of Normandy, appeared to us much finer than our own, in a visit made to these countries eight years since. They were in better condition, and much fewer miserable individuals among them. They had learned the important lesson, that a poor animal is not worthy of its support. We have always thought with Col. Pickering, that our country possesses at this moment a race of cows, and possibly of bulls, which selected with care, their progeny raised, and kept from contamination with inferior animals, for five or six generations, would produce a race of cattle which we might show with pride at Smithfield. But who are our capitalists that will select and take due care of them? Where is the man who has so cautiously guarded the progeny of a fine cow? And if he did, unless he should raise her bull calves as husbands, how can he keep the race pure.

Would there be any question in the mind of any sensible cultivator about to raise his own stock, that if a neighbour had improved his own race so that they were eminently fitted for the various uses of this most important agricultural animal for milk, for beef, and for draught, that it would be for his interest to procure that stock, and to sell off his own miserable breed? We trust not. Well, then, another nation has done this for us. She offers you the effect of 50 years experiment. Will you refuse it? We hope not.

The Massachusetts Agricultural Society offered a premium for the importation of the best races of Great Britain. They came. The premiums were awarded. The public admired the animals. The public may have been deceived: they may have been carried away by the novelty. Still they lingered, and looked, and crowded round these imported animals. They thought that they were superior to any of their own. Experienced farmers, herdsmen, butchers, so pronounced them; they awarded the premiums. Still this may all be infatuation, the mere love of novelty. They produced calves: the calves were better formed, grew faster, had flesh on more valuable parts, had better hair, and "*finer feel,*" indicating a disposition to fatten; they weighed more on the same keeping. Was all this illusion? We think not. We say we *think* not; we add, we know it is not *all illusion.* We know it to be founded on good and substantial grounds. We had some excellent cows of native race which we had carefully kept through three successive generations, and we have been amply rewarded for it. We have recently crossed them with the foreign breeds; the calves were manifestly superior. Not having a large farm, we parted with the calves to our friends, and recently upon inquiry of a friend who had two of our calves, and had a stock of eleven cows, we found the two highest as to milkers, were of this mixed race.

We have now two cows of the mixed race; one out of Fill Pail, and one out of Mr. Parsons' Holderness, and they are much superior to any cows we have been able to purchase for twenty years. We are now raising calves of the half blood to supply the cows which are now getting aged. One advantage they certainly have; they keep their flesh better without diminishing their milk. Still there are native cows, a very few, as good, and some better.

We now proceed to the most important consideration in relation to these imported animals.

Their calves sell better; they are more carefully watched; they have introduced a habit of attention to stock; they excite a spirit of rivalry, and one of the most valuable and important effects of the late interesting letters of Col. Pickering will probably be to induce our farmers to endeavour to compete with and surpass the imported breeds. While Col. Jaques, the most successful and the most intelligent of our breeders, who, under great disadvantages of location, seems to rival the celebrated Bakewell in his skill and attention, can sell his pure breed, as he has done this spring, at 300 dollars for an eight month's bull calf, there can be no doubt that the experiment will be fairly tried. As Col. Pickering does not seem to believe that any serious evil has resulted from the importation of a *worse stock*, we think we may safely encourage the crosses of this race with our own, keeping in mind as we ought to do, as he wisely suggests, that far the most ready and rapid way to improve our stock, is to select and raise only the best of our own breed. As this subject has taken deep hold on the public interest, we think we cannot more profitably for the readers of this journal occupy the public attention, than by copious extracts from the "Complete Grazier," the latest work on the subject. We shall extend our extracts to every species of live stock.

Devonshire Breed.

This breed is descended from the wild race. Its *specific characters* are: horns of a middle length, bending upwards; colour light red, with a light dun ring round the eye; thin face; hips wide; and thin skin. This breed of cattle is most admirably calculated for draught; though rather small in point of size, they amply compensate for that defect by their hardiness and agility. They fatten early. The Devonshire breed derives its name from the county where the cattle are chiefly bred. The figure above delineated, is from an ox belonging to Lord Somerville, and exhibited at his show of cattle, in 1806.

Of this race there are two varieties: 1, the Herefordshire—and 2d, the Sussex. Their colour is red, hair fine, thin skin; horns of a medium length, rather curving upwards; head and neck clean; hips, rump, and sirloin wide—thin thighs, straight back, chine narrow—small bone. The animal above delineated has been drawn from a prize ox of that spirited grazier, Mr. Westcar. These two varieties are, in every respect, similar to the parent race: the cows yield a good portion of rich milk. The Sussex and Hereford breeds occur particularly in the counties whence they are denominated—also in Kent, and various other parts of England.

Dutch, or Short-horned Breed.

Specific characters.—Hides thin; horns short; little hair; colour red and white, nearly equally mixed; tender constitutions. They possess, however, the valuable property of fattening kindly, and yielding large quantities both of milk and of tallow. The principal resort of this breed is in the eastern counties of England, as well as in some of those in North Britain, which border on the German ocean.

Lancashire Breed.

Specific characters—Long horned; hides firm and thick; hair long and close; necks thick and coarse: colours various with a white streak along the back; hoofs large—fore quarters deeply made, hind quarters lighter than those of other breeds. Constitution hardy. Milk less in point of quantity, but the cream is of a richer quality than that of other species of neat cattle. The long-horned cattle are principally reared in Lancashire, Leicestershire, Warwickshire, and the chief grazing counties.

Of this breed there is a variety, known by the name of Dishley, which is descended from that kind selected, improved, and recommended by the late Mr. Bakewell. This variety is in great request in various parts of England: its *specific characters* correspond, in a very great degree, with those of the parent stock—but the leg bones are fine, small, and clean, and the hides are thin. The Dishley neat cattle fatten kindly, and in a little time, upon the most valuable points, though yielding but little milk for the dairy, and producing little tallow.

Galloway, or Polled.

This breed derives its name from the county of Galloway, where, and also in some parts of the Lowlands of Scotland, the cattle are chiefly reared, and whence vast numbers are annually sent to Norfolk, and other English counties, to be fattened for the markets. In general they are without horns, though a few beasts sometimes have two small excrescences depending from the parts where horns usually grow, in colour and shape resembling the long-horned race, though somewhat shorter; hides moderately thick. The Galloway is a most excellent and hardy breed, fattening kindly on the best parts; the flesh is fine grained and well mixed with fat; the oxen are well calculated for draught.

Of this breed, also, there is a variety, termed the Suffolk Duns: they are polled, or without horns; small sized, very lean, and big bellied; colour, a light dun. Suffolk and the adjoining counties contain the largest number of this variety, which is excellently calculated for the dairy, and yields abundance of rich milk.

Alderney, or French Breed.

Specific characters.—Small sized; colour light red or yellow; horns smooth and neat; of tender constitutions. This breed occurs principally in the south of England, in the possession of gentlemen. The Alderney cows are very rich milkers; their flesh is high coloured, fine grained, and of excellent flavour. *(To be continued.)*

DISEASES INCIDENT TO CATTLE IN GENERAL.

(Continued from p 187, American Farmer.)

4. *Looseness* or *Scouring*, affects both oxen and cows, though its causes in both are different. In general, it arises either from want of sufficient food, both in quality and proportion; from being over-heated or over-worked; by feeding on wet, unwholesome fog, or after-grass; by not being lodged in dry situations; sometimes from giving them too large a quantity of cut hay or straw hotter than their natural temperature; though it is sometimes an hereditary taint, and in cows is caused by their taking cold while calving. But whatever be the cause, as soon as the scour or lax begins to appear, (and it may be easily known by their general debility and loss of flesh, the increasing paleness of their eyes, and irregular beating of the pulse, weakness of appetite, and frequent discharge of slimy excrement,) it will be necessary to house the beast, and put it to dry food; which, in early stages of the disease, will mostly effect a cure. Should the looseness increase, a pound of mutton suet, boiled in three quarts of milk, till the former is completely dissolved, may be given in a lukewarm state, which will contribute to allay the soreness necessarily occasioned by the continual irritation of the abdominal vessels. Or, in cases of obstinate scouring, the following drink may be beneficially administered: let half a pound of grossly-pulverized tormentil root be boiled in two quarts of water, till this is reduced to one quart; strain it off, add a quart of red wine, a quarter of a pound of finely-powdered chalk or whiting, and two ounces of diascordium, without honey. This mixture should be preserved in a bottle, and well shaken together; it will be proper to make it lukewarm before it is given. The dose is half a pint, to be administered three times in the day, at nearly equidistant periods, until the beast recovers. Or, in similar cases, the following preparation may be given, with equal, if not superior advantage: boil half a pound of pulverized common chalk in two quarts of water, till the latter is diminished to three pints; then add four ounces of hartshorn shavings, and one ounce of cassia, stirring the whole carefully. When the decoction is cold, two drachms of Thebaic tincture, or tincture of opium, and one pint of lime water are to be added; the whole should be kept closely stopped in a bottle, being well shaken before it is used: the dose is one or two hornsful, to be administered two or three times in the course of the day, as the nature of the case may require. But, where an hereditary *taint*, or *debility*, is the immediate cause of the scouring rot, as this malady is sometimes termed, it will baffle all the powers of medicine.

5. The *Pantas, Panting evil*, or *Pantasie*, prevails chiefly during the intense heat of summer, though it is sometimes occasioned by sudden colds It may be easily known by the panting or heaving of the animal's flanks, which is likewise accompanied by trembling and decay of flesh. In the treatment of this disease, it will be necessary to house the beast, and to give him, every six hours, (during the continuance of the chilly symptoms,) one quart of warm strong beer, in which one table spoonful of laudanum, a similar quantity of ground or grated ginger, and two table spoonsful of spirit of hartshorn, have been previously infused. His food should consist chiefly of sweet, dry hay, with warm water, in which nitre may be dissolved, if a fever be approaching; and the animal should be well littered with abundance of straw. As he gains strength, he should be gradually accustomed to the air, and after a short time will be fully recovered.

6. *Poisons.* While grazing abroad, cattle are subject to a variety of casualties or accidents, by eating the leaves of yew, various species of crowsfoot, and other acid plants, as well as by bites from mad dogs, or other venomous animals. In the former case, the most effectual practice consists in drenching the animal with a mixture of equal parts of lukewarm salad oil and vinegar, afterwards giving a gentle purgative of Glauber's salt, or socotrine aloes; and, if the viscera appear preternaturally distended with air, by administering a tepid infusion of tobacco in the form of a clyster, though the application of Dr. Monro's elastic tube, already described, (p. 187,) has, in some cases, been attended with success. With regard to bites of mad dogs; the only certain remedy is to eradicate the lacerated part, either by excision or by the actual cautery, the wound being kept open for a considerable time; but in cases of bites by serpents, vipers, or other venomous reptiles, we know of no better remedy than the continued and copious use of spirits of hartshorn, both as an application to the part affected, and also internally as a medicine.

7. *Red Water*, or *Bloody Urine.*—The name of this malady sufficiently indicates its nature, so as to render a specific description of it unnecessary; it may be easily discovered, in recent cases, by the animal's making frequent but fruitless attempts to discharge urine; but when they make much and frequent, with a considerable effusion of blood, it is a dangerous symptom. Cattle thus affected, usually leave the herd; extending their tails, they apparently feel pain in the urinary canals, and not unfrequently set their backs up higher than common.

The red water chiefly attacks young beasts, and is caused either by sudden changes of weather—eating acrid or prickly vegetables that puncture the smaller blood vessels, and consequently produce the bloody discharge; by bad or coarse food; and likewise by bad or stagnant water.

As soon as a beast is discovered to void blood, it should be conducted to a warm, dry shelter, and kept on good hay, or similar dry food; formerly, and in many places the custom still prevails, it was the practice to drench the animal with a pound of Glauber's salts, repeating the dose on the following day. But such violent remedies are by no means calculated, in our opinion, to operate as a styptic, to prevent the discharge of bloody urine; on the contrary, they rather tend to relax the animal, (already sufficiently weakened,) in a yet greater degree. We would, however, prefer a strong decoction of Peruvian bark, (for which oak bark may be substituted, if necessary,) in which a small quantity of alum has previously been dissolved. The dose may be two or three hornsful, to be given twice or thrice in the day, at nearly equidistant periods, accordingly as the violence of the disease may require.

8 The *Staggers.* This disorder is variously known by the names of the daisy, dizziness, epilepsy, lethargy, turning or vertigo, that sufficiently indicates its symptoms, the chief of which is a lethargic drowsiness, accompanied with a wavering, unsteady and staggering gait. The seat of this malady is either in the *brain* or in the *stomach.* In the former case, it is usually produced by hydatids, or small transparent bladders filled with water, or by some other matters immediately acting upon the brain. Where this is the cause, medicine can afford no assistance whatever: but we remember an instance of epilepsy which occurred many years since, where this formidable disease was cured by the operation of *trepanning*, which was performed by Mr. Cheston, an expert surgeon, then residing at Gloucester.* But where the staggers is caused by plethora, or too much fulness of blood, bleeding, and cooling purgative medicines should be resorted to; and, as it is necessary to confine the beast in a warm stable or shelter, it will greatly contribute to promote the circulation, thus necessarily stagnated for want of exercise, by rubbing him every day with dry straw, and allowing him plenty of litter to promote perspiration.

9. *Wounds.* Cattle, in general, are subject to a variety of accidents, which the limits of our work forbid us to specify, and which indeed are so numerous, that it is scarcely possible for human foresight to provide for every contingency. Hence our remarks will be confined to the most appropriate remedies for punctures, bruises, or common wounds.

In cases of common, fresh wounds, *nothing* is more necessary than to apply a salve, consisting of white lead and oil of turpentine, incorporated together with a little brandy, to the lips of the cut, which should be drawn as closely together as possible; and carefully to exclude the air But if the laceration be deep, it must be washed with warm milk and water, and the ragged flesh, if any, cut out with a sharp knife; after which, the wound may be filled with lint or tow, dipped in the following digestive ointment, viz: Mix Venice turpentine and balsam of copaiba, or capivi, of each one ounce, with two ounces of yellow basilicon. The wound must, as in the former case, be kept free from air and dirt, or its healing will be materially retarded.

The following remedy has been recommended as a certain styptic for fresh wounds: Bruise equal parts of stinging-nettles and salt in a mortar, till a pulp or mash is formed, and apply it to the wound; the bleeding of which, it is asserted, will *immediately* cease, however deep or dangerous such wounds may be. Not having had experience of its efficacy, we cannot vouch for its utility: but as the articles are always at hand, this specific, if such it be, certainly deserves a fair trial. Where, however, an animal has received any blows or bruises, without breaking the skin, it will be sufficient to bathe the part affected with camphorated spirit of wine; but if the swelling become inflamed, it will be requisite to make a slight incision below the contused spot, in order to promote suppuration, after which the following salve, or plaster, may be applied. Let frank incense and Venice turpentine, of each one ounce, be gradually incorporated over a slow fire, with two ounces of Burgundy pitch; and, when of a proper consistence, let a sufficient quantity be spread upon a pledget of tow or strong linen rag, and well fastened on with a bandage. As soon as the wound begins to discharge the matter freely, the digestive ointment and treatment just mentioned, may be adopted. Lastly, should any swellings or local humours arise, without the beast receiving any external injury, or if the skin should be very slightly bruised, they will be effectually removed by supplying Goulard's mixture, which is prepared by adding two tea spoonsful of extract of lead, and one large spoonful of strong camphorated brandy, to one pint of water; the whole is to be well shaken together, and set apart for use.

DISEASES PECULIAR TO COWS.

10. *Cough,* or *Hoosing.* This disease may be easily known, by the shortness of breath and difficult respiration that invariably accompany it. Sometimes it arises from extraneous matters adhering to the throat, which, resisting the powers of mastication, produce an unusual tickling in that part; but more commonly it originates from cows taking cold while calving. A regular supply of sweet, succulent food, together with warm housing, (especially during the winter,) is the only certain remedy that can be depended upon in this case; though some have recommended one ounce of pulverized aniseed, a similar quantity of tar, and of vinegar of squills, to be infused in a quart of warm ale, sweetened with honey. With this liquor the animal must be drenched every day for several weeks, otherwise no beneficial effects can be expected to be derived from such treatment.

11. The *Puerperal,* or *Milk Fever,* is chiefly occasioned by cows taking cold while calving. Hence it becomes particularly necessary to watch them when near their time of calving, as many valuable beasts are lost for want of due attention to this circumstance. Cows thus affected should be taken into the house, their heads being placed highest, in order that the natural discharges may take place without inconvenience They should be allowed plenty of dry litter, and in other respects generally treated as in the case of violent colds, (which have already been discussed in No. xxiv. p. 187, of the Farmer,) excepting that no blood must, on any account, be drawn, unless in cases of extreme necessity.

12. *Affections of the Udder.* The udders of young cows, that are in high condition, are sometimes greatly swollen and inflamed for several days before they calve, in which case it will be proper to milk them repeatedly, and alternately to anoint the distended udders with cooling ointment and brandy. Beside these swellings, the udders of cows are liable to injuries, which are often of serious consequences, by falls, blows, wounds from sharp or pointed instruments, by the violent sucking of calves, and also from the injudicious or rough treatment of harsh or inexperienced milkers. While the inflammation remains in an indolent state, the parts affected ought to be repeatedly anointed in the course of the day with fresh butter, or with a salve, consisting of one ounce of Castile soap dissolved in one pint and a half of new milk over a moderate fire, constantly stirring it till it be thoroughly incorporated. An ointment, prepared from the juice of the leaves of the common thorn apple, (*Datura Stramonium* of Linnæus,) mixed with hog's lard, is likewise said to be an excellent application for swollen udders; or, the tumour may be anointed with a little mixture, consisting of camphor and blue ointment, about half a drachm of calomel being given in a hornful of warm beer, for three or four mornings, if the malady continue to increase Where, however, the udder and teats are considerably inflamed, internal remedies should be resorted to: for this purpose it has been recommended to mix four ounces of nitre with one pound of common salt, and to give two tablespoonsful of the powder in a gallon of thin water-gruel every three hours.

But in case the disorder should, from neglect, have made such progress as to exhibit hard tumours, the following fomentations may be applied: let one handful of common hemlock, (*Conium Maculatum,* L.) a similar quantity of the dwarf or round-leaved mallow, (*Malva Rotundifolia,* L.) and the same portion of common melilot, (*Trifolium melilotus officinalis,* L.) be boiled in a sufficient quantity of water, and diligently applied, as warm as the beast can bear it. As soon as the tumour opens, let the sore be properly cleansed, and then cover it with a plaster of Turner's cerate, or of Basilicon ointment. The annexed remedy has also been successfully employed in obstinate cases of ulcerated udders, viz. Take gum ammoniac and gum galbanum, Castile soap, and extract of hemlock, of each one ounce; form them into eight boluses, one of which should be given every morning and evening.

Lastly, where the teats only are sore, they may be washed with clean, warm soap-suds, and rubbed with an ointment consisting of pulverized ceruse, or white lead, that has previously been saturated with brandy, mixed with a sufficient quantity of goose grease, or elder ointment. [*Complete Grazier.*

MULES.

[Some weeks since, passing along Market-street, our attention was arrested by several teams of extraordinary mules, moving with heavy waggons and with a briskness at least equal to any horse teams. We could but stop to admire them, and having ascertained that they belonged to Gen. Charles Ridgely of Hampton, the President of the Maryland Agricultural Society, we took measures to ascertain the size of these valuable animals, and here annex the statement. It has been long known to us, that for all the hard and heavy labour connected with his furnaces and forges, Gen. Ridgely had substituted mules for horses. For some time he indulged an old servant in keeping one horse team, but it was found that the mule teams performed their day's journey, hauling equal weight, sooner than the horses, by one hour, and the superior value of the mules has been so fully established that they have altogether superseded horses, with entire conviction, after ample experience, of the great saving accomplished by the change.]

The exact height of 30 mules, belonging to Gen. Ridgely, of Hampton, composing 5 teams, attached to the Northampton Furnace, viz:

No.	*Hands.*	*Inches.*	*No.*	*Hands.*	*Inches.*
1	14	3	16	15	2½
2	13	1	17	15	—
3	14	3	18	14	3
4	14	2¾	19	14	2
5	13	1½	20	14	2½
6	15	—	21	14	3½
7	15	—	22	13	3½
8	14	3	23	14	3
9	14	1½	24	14	1
10	14	3½	25	14	3
11	15	—	26	14	3½
12	14	3	27	13	2½
13	14	2½	28	14	2
14	14	3	29	14	3½
15	14	2½	30	15	—

The ages are from 5 to 16 years, and a few over 16.

September 1, 1825.

WHITE FLINT WHEAT.

Extract of a letter from a respectable correspondent in Cecil county, (Md.) dated Aug. 20, 1825.

"With regard to the white flint wheat, my opinion is, that the grain as to colour and form, is exactly our Lawler wheat, but the grain is larger. Its time of ripening is exactly the same. The increased size of the grain I attribute to its being northern wheat; for my crops have always been improved by using northern seed wheat. Yet it differs from the Lawler in one respect; you may always in that, find plants of smooth red chaff, which invariably gives a dark red grain. In this white flint, those red heads give beautiful mellow white grain. My crop was so little injured by fly, that I made no remarks—my most perfect wheat is the blue straw; excepting the New York red flint; all my grain is fine, that was greatly injured by rust, and shall not sow any more of it."

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* For this interesting fact we are indebted to the excellent "Practical Essays," published in the year 1772, by Dr. Lyons, of Bath.

HOGS.

PROPENSITIES OF DIFFERENT BREEDS—LIABLE TO BE POISONED BY EATING COTTON SEED.

Extract to the Editor, dated Edisto Island, Aug. 25, 1825.

The Parkinson hog has a preference over the Cobbett. The former is mild and industriously disposed; the latter ferocious to poultry, &c., and mischievous generally. I have been, however, so far unsuccessful with both, having had a great many destroyed with cotton seed, which they greedily devour, and is as fatal to them as arsenic is to man. If any of your numerous correspondents would point out a remedy, or the means of neutralizing the deleterious effects of this seed, it would be saving the lives of thousands of the swinish race, and confer a great favour on the Southern planter. Cotton seed is otherwise nutritious food to ruminating animals.

PROSPECTS OF THE COTTON CROP.

Dear Sir, 23d *August*, 1825.

Since my last of the 9th inst. the prospects of the cotton crop of this district are much reduced. We have had a severe drought and the hottest weather this season, with a week of very heavy and incessant rains—these produce a loss of almost all the *forms* and *small pods*. It seldom occurs that *pods* so large as the two enclosed, drop. In the last ten days our cotton crop has sustained a serious injury.

With respect,
JOHN S. BELLINGER.

HORTICULTURE.

ON THE CULTIVATION OF THE VINE.

By Mr. Brun-Chappuis, of Vevey.

(Translated for the American Farmer, from late numbers of the "Bulletin des Sciences.")

[In publishing this treatise, the Editor of the Gazette of the Canton of Vaud, in Switzerland, observes, "that it is the work of one of the most enlightened cultivators of a canton where the culture of the vine is best attended to. It was under this impression that he felt himself induced to give it a literal publication; and he adds, that the vines of Mr. Brun, are distinguished from those around them, by the beauty of their appearance, and the abundance of their produce. The nature of this small treatise, of which every line may be said to contain a precept, is such that it cannot be analyzed: and the branch of agriculture to which it relates, being the subject of the care and meditation of the most enlightened agriculturists, we deem it a duty, notwithstanding the abundance of subjects on file, to publish it entire, which we hope to do within the space of two insertions.]

ARTICLE I.

Preparation of the ground for planting a Vineyard.

As soon as you perceive that your vines are decaying, and when you have determined upon renewing them, notice that they should be cut much longer than is usually done, with a view of obtaining from them all they can yield. They should on that year be abundantly manured. When you commence taking them up, open a ditch two or three feet deep, according as the soil will admit; during this operation, the earth from the surface must always be made to replace that from the bottom of the ditch, in such a manner that the virgin earth which is taken from the bottom, may be found on the surface. This operation should be performed in a dry season, in autumn or early in the spring, that the earth may have time to settle. In filling up the ditch, the earth should be well worked, to prevent any vacancies which would be injurious to the cuttings; treading upon it should be carefully avoided. Some days before planting the cuttings, it should be ascertained whether any of the ditches require levelling, in which case it should be done in dry weather; the cuttings must be planted after a rain. The earth manured the preceding year, and which has been placed at the bottom of the ditch, affords to the grapes from the bottom of the cuttings, a nourishment which makes them thrive, and secures to the vineyard a vigour and duration which it would not acquire without this precaution. The virgin soil is placed on the surface, that the cuttings may not shoot forth high and useless roots, which only injure those at the bottom. Care should be had not to take up a vine, growing in a rich soil, during wet weather. For vines, growing on a gravelly soil, the same precaution is not required.

ARTICLE II.

Selection of Cuttings, and precautions to be taken until the time of planting them.

Some time before the vintage, go to the vineyard from which you intend to select your cuttings—it should neither be too young nor too old; a vineyard from 8 to 16 years growth is the best. As much as possible, choose your cuttings from a vineyard planted from a good nursery: to prevent any mistakes occurring, at the time of pruning the vines, those from which it is contemplated to withdraw cuttings, should be marked; and those should be preferred whose blossoms have been the most perfect, which may be easily known from the grapes being very close. The preference should be given to the grape called the *Fendant roux*, both for quality and quantity. The cuttings should be made before the sap runs. The day, or the day after they are cut, they must be cleaned, put in bundles, placed in a cool place, and wet twice a week. Four days previous to planting them, put them in clean water, about 4 inches deep, and immediately before they are planted, cut off carefully the ends, which operation is termed *refreshing the cuttings;* thereby removing that part of the pith which is black, and consequently decayed. To suffer the cuttings to remain too long a time under a water, is pernicious: when they are too full of water, they shoot immediately after being planted, and wither—a loss which is not to be apprehended, if the above method is observed. The same risk is incurred if the cuttings are taken from a young vine, because they are then too porous; whilst on the other side, if they are taken from an old vine, they are not sufficiently so. They shoot with much difficulty, and notwithstanding the care that may be taken of them, will not thrive.

Some vine-dressers plant their cuttings in ditches, with a hoe, bending them half a foot under ground; others plant them with a dibble. Others plant cuttings that have already taken root, at from 8 to 18 inches deep, which last is the measure at *Bern.*—There are some who press the earth so closely about them that it is impossible to pull them up; others put dust in the hole. After having tried these different methods, I have discovered that by planting the cuttings in ditches, they will succeed; but this method is too long and difficult, if you wish to plant them regularly, and consequently a great inconvenience arises in propagating them. I prefer the method of planting them with a dibble, which, with certain precautions, is crowned with success. Planting cuttings which have already taken root, is decidedly the worst method, unless employed upon soils which are naturally unfavourable to the growth of the cuttings. It is true they take well enough; but I have remarked that the vines decay sooner, and are much longer growing than those which proceed from cuttings without roots. If the cuttings are not planted sufficiently deep, they are apt to be injured by tillage and drought. On the other hand, those which are planted too deep are not productive, it being very difficult for the sun to heat the earth as far as the roots, excepting, perhaps, in very hot and dry years; in rainy years they are not at all productive. From my own experience, I think the proper depth is 10 inches in level ground, and from 12 to 14 in hilly or uneven ground. I have likewise remarked that it is injurious to press the earth about the cuttings, because the first roots which shoot being very delicate, cannot, without much difficulty, strike through the hard ground. Those who fill the hole of the cuttings with dust, cannot expect to succeed, unless there should immediately follow a rain. The most advantageous method is, as soon as the cuttings are in place, to let the loose earth fall in gently, until it is half full; then pour in a little water to settle the fine earth, that it may adhere to the cuttings and leave no vacancy, a disadvantage which arises from a different mode of preparation. The earth about them not being pressed, affords the roots room to spread, and should dry weather continue long after they have been planted, the cuttings will not suffer so soon. The remainder of the hole should be filled with virgin soil, which is found on the surface of the earth.—You should never plant but in dry weather, for fear of pressing the earth too much. As to the distance, I think one of two feet and a half square the proper one. The produce, as well as the quality of the wine, is very much injured by their being planted too near; besides, they cannot reach their ordinary size, nor last as long as they should. There likewise results much difficulty in working the vineyard. On the contrary, by planting them too far apart, they will not yield as much; sometimes in strong soils, in which they are apt to grow large, I find it will do to plant them three feet square apart. To insure the success of a vineyard newly set, and prevent the inconvenience of filling again with cuttings which have taken root, the vacancies occasioned by the first cuttings not having succeeded, I indicate as a sure method, to plant between each line of two cuttings, a middle one, which will serve to propagate, or to supply vacancies. The advantage of this method appeared to me the greater, inasmuch as the supernumerary ones may remain for several years, and be *metailler*,* and eventually eradicated—which is very profitable and free from the inconvenience arising from the quantity of vegetables which vine-dressers are in the habit of raising between their cuttings. Vine-dressers are generally of opinion, that the leaves should not be nipped off the cuttings the first year; I think differently. for, on the contrary, experience has shown me that the leaves should be nipped off as soon as they have sufficiently put forth. Not more than two branches should be left, instead of four or five, which shoot generally, and which, if permitted to grow, only injure the good ones. In autumn, all the buds growing among the leaves, should be taken out, which contribute to ripen the wood; this is very essential, for when the wood is not ripe before the frosts come on, many of the cuttings that appeared to thrive, are destroyed. Each cutting should be provided with a small prop. The ensuing spring they should be pruned very short, and early in the season, to save the sap, which is lost if the operation be performed too late. They should be worked in time. As soon as they commence to shoot,

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*I believe that by *metailler* is here meant—cut and bundled as faggots for fire-wood.

nip the buds off the stalk, for thence the cuttings bud first, in consequence of the sap flowing slowly. the reverse of which happens when the vine is vigorous. When the sprigs or branches have put forth about four inches, the first *leafing* should be performed, leaving only two or three, at most four branches, on each cutting, according to its strength.

The year in which the cuttings have been planted, and the two following, the earth should be frequently tilled, and kept loose and clean; from time to time the *rabiuis** which grow between the leaves, should be removed, and the nipping should not take place until late; in doing it early you endanger the growth of the plant, inasmuch as it accelerates the ripening of the wood, which should be avoided. The following year, the cuttings should be pruned in the same manner as indicated above; at all events three short cuttings can be made in each vine, and the largest propped, by raising the branches with straw The custom of manuring the first or second year, is more injurious than advantageous; for, by this means, the growth of the high and parasitical shoots are favoured at the expense of the lower ones, which are sufficiently nourished by the earth which has been put at the bottom of the ditch. Manuring should be resorted to only on the fourth or fifth year, and that according to the nature of the soil and the depth at which the cuttings have been planted. Those which have been planted in strong soils, do not require to be manured so soon, for besides the injury they thence receive from the parasitical roots, of which we have spoken above, they produce fruit prematurely, impede the growth of the vineyard, and prevent it from acquiring its proper vigour and size. Cuttings which have been laden with fruit too young, are often observed to decay after two years. The first year, the leaves should be nipped by skilful vine-dressers; the second year, and the two or three following, the earth around them should be hoed, commencing at each row, going from right to left, and left to right, one row after the other, in order to remove the useless roots. In acting differently, you run the risk of missing some. The fourth year, they should all be propped and tied, early, in order that the weight of the branches, or the wind, may not break or injure the stalk. The height of the stalk should be not less than six inches. When the vine is too short, it is apt to be injured in working it, and more easily affected by the frost. When the grapes are too near the ground, they decay sooner, and are more exposed to the ravages of insects. On the other hand, when the vine is too high, it does not produce so much, and the quality of the wine is inferior. The parasitical roots should not be grubbed up, but cut (not too close, however,) to the stalk. The most favourable season for planting, is when the vine commences to shoot, the earth being then warm. The cuttings should be examined, in order to ascertain whether they have all budded; if there are any that have not put out, they should be stripped as far as the first bud under ground; by such a precaution, a great many are saved which otherwise would have been lost. Some vine-dressers plant the cuttings which are beneath the walls, by pairs, with a view of saving ground; but those who adopt this method are ignorant of their own interest—for these cuttings being too close, do not prosper, and never yield so much. It is not proper to put more cuttings in the rows that are next to the wall, than in the others; they should be planted at a distance of eight inches from the wall, as well in order to find a sufficient nourishment on that side, as to facilitate their being worked. The cuttings which are planted beneath the walls, should be chosen from a late vine: for instance, the large red kind; for if the same kind is planted there as in the other parts, the grapes will ripen sooner on the former than the latter, and will, consequently, be exposed to destruction by insects, or they will rot. If, however, you plant of the same kind throughout, those near the walls should be elevated higher than in any other part of the vineyard; by this means they are not so much exposed.

ARTICLE III.

Of Pruning.

As soon as the weather permits, in February, if possible, you should prune your vines, commencing with the earliest and those which are most delicate. They should, generally, be pruned very early—for then there is a dry crust formed at the extremity of the cut, which prevents the sap from wasting, which very much contributes to restore vigour to the vine, and to prolong its growth, provided care is had not to cut too near to the bud, (say about four inches.) It cannot be too strongly recommended to vine-dressers to be careful on that point; that is, to prune at a proper distance from the bud, for it is one of the most certain means of preserving the strength of the vines, Moreover, the crust which we have said covers the cut, would reach, otherwise, to the bud, and impede its shoot, or perhaps destroy it entirely: in the former case, it would produce wood alone, and but little fruit. By late pruning you run the risk of losing the sap, and consequently exhaust the vine. It has been, however, remarked, 1st. That when frosts happen immediately after the shooting of the vine, those which were pruned late are less injured, as they are not so forward. 2d. That sometimes, when they have been pruned late, they yield a more abundant crop. But these observations, that bear only on a few accidental occurrences, should, by no means, prevent adopting the maxim of early pruning.

Commonly, four cuttings are made to each stalk, taking care to turn the cuts outside of the vine, with a view of preserving the exterior bark entire—for, as soon as a cut is made between two old ones, the vine only vegetates, if it does not entirely decay. So much so, that an indifferent shoot outside, should always be preferred to a fine one within. The method of pruning the young shoots, practised by many vine-dressers, is injurious to the quality, as well as the quantity of the wine; it is likewise prejudicial to the duration of the vine; by being thus pruned on all sides they lose their vigour, which compels the vine-dresser to prune afresh the spurious branches which grow at the top of the vine, and which produce less, during some years, than the genuine ones. By pruning always upon young ones, the ends or horns of the vines are stunted, thereby forming a round head, which has some inconvenience, inasmuch as that in plentiful years the grapes being too near each other, and not allowing the rays of the sun to penetrate through the branches, they cannot ripen—thereby rendering the quality of the wine inferior. When they are too close they do not yield the same quantity of wine, because they cannot ripen nor acquire their usual size. It is well to observe, that all the setts should not be pruned in the same manner; the most delicate ought not to be much laden, and should be pruned the first. Those vines that bear the most common grapes, such as those called the small and large *rougasse*, ought to be pruned last; and instead of four cuttings, five or six may be made on each vine. The branches that have been cut off should be removed as soon as possible.

(*To be continued.*)

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* Rust?

EDDOES OR TANNIERS.

[This is represented to be a valuable vegetable, cultivated in South Carolina. If we have ever seen it, we are not aware of it. We find the following account of it in "Nature and Art," Vol. 14. p. 13, 14.]

Eddoes, a variety of the *arum esculentum*, L. another variety is the *tanniers*.

These plants resemble each other, except that eddoes are smaller, more acid, and require longer boiling than tanniers.

They are planted in South Carolina, in the latter end of March, in small beds, or hills, three or four feet apart; the leaves are very large, from eighteen inches to two feet long, and from twelve to fifteen inches wide. For seed plants, the small fruit of the last year, or the larger fruit, cut in two, is planted. During the growth the earth is drawn up once or twice round the root, and the grass hoed from them; they are dug in before the heavy frosts commence, and put away in cellars, covered with earth and straw, or pine leaves.

They are excellent when boiled and eaten with butter like yams.

A rich mellow soil, inclining to moist, such as is generally found along declivities of land, just before it becomes wet and boggy, answers best for eddoes and tanniers.

LADIES' DEPARTMENT.

THE CULTURE OF FLOWERS.

ADONIS.

Ranunculaceæ.—Polyandria Polygynia.

Italian, adonio.—*French*, adonide; rose rubi; gouttes de sang (drops of blood;) aile de faisan, (pheasant's-wing;) œil de perdrix, (partridge's eye.)—*Greek*, eranthemon, (spring-flower.)—*English*, adonis-flower; bird's eye; pheasant's eye; flos-adonis. The autumnal adonis is also called red maythes, red morocco; to which Gerarde adds may-weed, and red camomile. "Our London women, says he, "do call it rose-a-rubie."

This flower owes its classical name to Adonis, the favourite of Venus: some say its existence also; maintaining that it sprung from his blood, when dying. It is likely that the name arose from confounding it with the anemone, which it resembles. There are, however, other flowers which lay claim to this illustrious origin; the larkspur is one, but the claim is too weak to be generally allowed. Moschus has conferred this distinction on the rose. Others, again, trace its pedigree to the tears which Venus shed upon her lover's body; and Gerarde would persuade us that these tears gave birth to the Venice-mallow: but the anemone has pretty generally established her descent from both parents.—See *Anemone.*

The name of the beautiful huntsman, in his living capacity, however, applies well enough; for the Adonis is handsome and ruddy, and an enemy to the corn; but the flower is not so hardy as its godfather, and must be sheltered from the frosts of winter.

The Autumnal, or Common Adonis, has usually a red flower; but there is a variety of this species, of which the flowers are lemon-coloured It is a native of most parts of the south of Europe; in Germany it grows wild among the corn; as it does, according to Gerarde, in the west of England. It is very common in some parts of Kent, particularly on the banks of the Medway,—a water-nymph, according to Spenser, famous for her flowers.

> "Then came the bride, the lovely Medway came,
> Clad in a vesture of unknowen geare,
> And uncouth fashion, yet her well became,
> That seemed like silver sprinkled here and there
> With glittering spangs that did like stars appear,
> And waved upon, like water chamelot,
> To hide the metal, which yet every where
> Bewrayed itself, to let men plainly wot,
> It was no mortal work, that seemed, and yet was not.
>
> "Her goodly locks adown her back did flow,
> Unto her waist, with flowers bescattered,
> The which ambrosial odours forth did throw
> To all about, and all her shoulders spread
> As a new spring: and likewise on her head
> A chapelet of sundry flowers she wore,
> From under which the dewy humour shed,
> Did trickle down her hair, like to the hore
> Congealed little drops which do the morn adore."

The Vernal Adonis [Fr. *hellebore d'Hippocrate*] is a perennial; and, as it does not flower the first year, it might be more convenient to purchase it at a nursery when in a state to flower, than to raise it at home. It may, however, be treated in the same manner as the Autumnal Adonis. It is a native of Switzerland, Germany, &c. It bears a large yellow flower, which blows about the end of March, or the beginning of April.

The Apennine Adonis is very similar to the vernal, of which it is termed the sister; but it continues longer in flower than that species, which, true to the name it bears, comes and goes with the spring. The reader of poetry is aware that Adonis, after death, was supposed to spend his time alternately with Proserpine in the lower regions, and with Venus on earth.

> "Go, beloved Adonis, go,
> Year by year thus to and fro,
> Only privileged demigod!
> There was no such open road
> For Atrides; nor the great
> Ajax, chief infuriate;
> Not for Hector, noblest once
> Of his mother's twenty sons;
> Nor Patroclus; nor the boy
> That return'd from taken Troy."*

There is also a shrub Adonis, a native of the Cape of Good Hope.

The Autumnal Adonis is an annual, and the seeds sown in spring will flower in October. If some of the seeds are sown in September they will blow early in June. As the flowers open sooner or later in proportion to their exposure to the sun, a little attention to their arrangement will insure a longer succession of them. The seeds should be sown two or three in a pot, half an inch deep. During the severity of the winter, the pots should be housed; but in mild weather they should stand in the open air. In dry weather they should be occasionally, but sparingly, watered, just enough to preserve them from drought.

AFRICAN LILY.—AGAPANTHUS.

Hemerocallideæ.—Hexandria Monogynia.

The botanical name of this flower is from the Greek, and signifies a delightful flower.

This Lily is a native of the Cape of Good Hope: it is of a bright blue colour; very showy and elegant. The flowers blow about the end of August, and will frequently preserve their beauty till the spring.

It is increased by offsets, which come out from the sides of the old plants, and may be taken off at the latter end of June; at which time the plant is in its most dormant state. It should be turned out of the pot, and the earth carefully cleared away, that the fibres of the offsets may be the better distinguished: and these must be carefully separated from those of the old root. Where they adhere so closely as not to be otherwise parted, they must be cut off with a knife; great care being taken not to wound or break the bulb, either of the offset or of the parent plant.

When these are parted, they should be planted, each in a separate pot filled with light kitchen garden earth, and placed in a shady situation, where they may enjoy the morning sun; a little water should be given to them twice a week, if the weather be dry; but they must not have much, especially at this season, when they are almost inactive; for as the roots are fleshy and succulent, they are apt to rot with too much moisture. In about five weeks the offsets will have put out new roots: they may then be removed to a more sunny situation, and may have a little more water; but still not plentifully. In September they will put out their flower-stalks, and towards the end of the month, the flowers will begin to open; when, unless the weather be very fine, they should be housed, that they may not be injured by too much wet, or by frost; but they must be allowed as much fresh air as possible. During the winter they may have a little water once a week in mild weather, but none in frost. This flower must be watered only at the roots.

THE VIRTUOUS WIFE.

Translated from the German by a student.

Whosoever has gained a virtuous wife, possesses a treasure of intrinsic worth—a prize of higher value than the most costly pearl.

Such a treasure had Rabbi Meir, the great teacher, obtained He sat, on the Sabbath, in the synagogue, instructing the people. In the mean time, death, who often aims his poisonous shafts against the infant breast, and spares the aged and infirm, did, by an unexpected stroke, deprive the parents of two goodly sons; both were of an handsome shape, —both, by a father's care, enlightened in the law.

His partner looked at first on their bereavement with the feelings of a tender mother; but, soon her piety shone predominant, and in the duties of the wife, each selfish wish was buried. Anxious to save her husband from those pangs which a too sudden knowledge of his less might create, she moved the bodies of her sons into her chamber; laid them on her bed, and with white drapery concealed them.

In the evening, Rabbi Meir returned, who with a father's fond solicitude, inquired, "where are my sons that I may give to them the blessing?"

"They are gone into the synagogue," replied his wife.

"I looked around, while there, in expectation of their coming, but saw them not," rejoined the Rabbi.

She reached him a goblet with wine; he praised the Lord at the ending of the Sabbath, drank and again asked.

"Where are my sons that they may also drink and partake of my blessing?"

"They are not far," she said, and wishing to change the objects of his thoughts, with ready hand prepared the evening meal. Of this did he partake, and after giving thanks his wife thus spoke.

"Rabbi, permit me to ask your judgment in a cause which much concerns me. A few years since a person gave unto my care some jewels; these I received with pleasure, watched their safety with an anxious mind, contemplated with pride their worth, and dared at length to view them as my own; when, in an unexpected hour, a messenger is sent, who, in his master's name, doth claim my valued charge; shall I restore these gems to him?"

"My wife ought not first to inquire this," said Rabbi Meir; "wilt thou delay returning to the owner each one that he hath lent thee?"

"Oh no," answered she, "if it is unjust so to do; —but I would not return them without thy knowledge."

She then conducted him to the chamber, walked forward, and removed from the dead bodies their covering.

"O my sons! my sons! cried the father, in the fulness of his grief—do I find you thus? I gave you life, I enlightened your mental eyes in the law, and looked upon you as the solace of my declining years, when, on a sudden I find myself bereft of you."

She turned from him, wishing to conceal the agitation of her mind, but roused at length by the violence of his grief, she seized him by the hand and spoke.

"Rabbi, hast thou not taught me, that it is contrary to the morals, as well as the religious duties of men, to refuse restoring what is intrusted to their care? Behold, the Lord hath given, and the Lord hath taken away, blessed be the name of the Lord!"

"The name of the Lord be praised," rejoined Rabbi Meir, conscious he had erred at repining at His will who is infallible; in murmuring at His mandate, who is omniscient.

It is truly said, "whosoever hath found a virtuous wife, has a greater treasure than the most costly pearl; she opens her mouth with wisdom, and in her tongue is the law of kindness."—*N. Y. Mirror.*

MISCELLANEOUS.

AMERICAN ECLIPSE.

[From an authentic history of this celebrated horse, we extract the following "particular account of the manner in which the colt was raised—as a document well attested by the result, it is worthy of the attention of the breeders of horses."]

"AMERICAN ECLIPSE" is a sorrel horse, with a star, and the near hind foot white; fifteen hands three inches high, possessing a large share of bone and muscle, and excelling all the racers of the day, in the three great essentials of *speed, stoutness* or *lastingness*, and *ability to carry weight.*

He was foaled May 25th, 1814, at Dosoris, in Queen's county, on Long island, and from a memorandum, in the hand-writing of General Nathaniel Coles, the breeder, it appears that he was reared in the following manner. The colt was weaned on the 10th of November. At the commencement of winter, fed with four quarts of shorts, which was increased during the winter to eight quarts per day: hay, clover dampened.

Second year, in the spring, turned to grass with no grain. Nov. 10th, put up—fed with eight quarts shorts per day; during winter, shorts increased to *ten* quarts--hay, the same as first winter.

Third year, turned to grass, with four quarts shorts per day. September 1st, commenced breaking—feed, eight quarts oats—through the winter, hay as formerly—grain, ground corn and oats, equal to eleven quarts oats. March 1st, commenced and trained for nine weeks, then gave a trial of *two* miles, and found the colt very superior.

Fourth year, in summer turned to grass—fed with ground oats and corn, equal to nine quarts oats—in winter, hay as formerly, with nine quarts oats per day, till the 1st March, 1818, when commenced training; feed, oats and cracked corn, equal to twelve quarts oats.

Fifth year, late in May, 1818, ran the *three* mile heats at Newmarket, on Long island, and won the first day's purse with ease, beating Black-eyed Susan, and Sea Gull, then called the best three-mile horse of the day: turned to grass 1st June, with about six quarts of oats a day; in winter, fed with hay as before, with ground corn and oats. March 15, 1819, sold Eclipse to Mr. Van Ranst.

At five months old, while a suckling, he gave his owner such a sample of stride, strength and speed, that he was at that time named "American Eclipse."

While a colt he was not confined, but during the winter season turned out every fair day. He was first shod in the spring, when three years old.

Pedigree.—AMERICAN ECLIPSE was sired by Duroc; his dam, Miller's Damsel, by Messenger; his grandam, the English mare Pot8o's, imported in 1795, then three years old, by Wm. Constable, Esq. and bred by Lord Grosvenor, sired by Pot8o's, and Pot8o's by the celebrated Horse "Eclipse;" his great grand-dam by Gimerack, Gimerack by Cripple, and Cripple by the Arabian of Lord Godolphin.

Duroc, a Virginia horse, was sired by Diomed; his dam Amanda, the property of Mr. Mosely, was sired by Grey Diomed; her dam by Virginia Cade.

Messenger, the sire of Miller's Damsel, was an English horse, bred by John Pratt, Esq. of Newmarket, and died the property of Mr. Van Ranst, January 28th, 1808, aged twenty-eight years; was sired by Mambrino; Mambrino by Engineer; Engineer by Sampson, (the sire of Bay Malton) who was got by Blaze, who was got by "Flying Childers," a son of the Darley Arabian; Messenger's dam, (dam of Leviathan) by Turf; his grand dam by Regulus, a son of the Godolphin Arabian; his great grand dam by the Bolton Starling, out of the Fox mare, dam of Snap, &c. his grand dam was sister to Figurante, dam of Revenge, &c. The performances of Messenger on the turf, previous to his importation, were superior to any horse of his day. In 1783—4 and 5, he won eleven purses and a king's plate, and was never beaten.

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* See the Translations from Theocritus, in Hunt's Foliage.

Diomed, sire of Duroc, was got by Florizel, who was got by King Herod, out of the Cygnet mare; his dam the Spectator mare, (dam of Pastorella &c.) her dam Horatia, got by Blank; her grand dam by Childers, out of Miss Belvoire, by Grantham, the dam of Fleece'em, Steady, &c. Diomed, a chestnut horse, was foaled in 1777, and after running several years, he stood to mares, and became the sire of many first rate horses. In 1798, he was imported into Virginia, and covered with his former success until his death, at the age of twenty-nine years. In Virginia he became the sire of Florizel, Duroc, Sir Archie, Hampton, Gracchus, Hephestion, &c.

On the destruction of Vermin and the Pickling of Seed Wheat.

Hitherto it would appear that no effectual remedy has been discovered to check the destructive ravages of the grub and caterpillar vermin, which in orchards and kitchen-gardens occasion so much loss to the industrious gardener The following preparation is humbly recommended as a valuable remedy to vanquish, if not entirely to exterminate, all the tribe of vermin that prove so injurious to the industry of those who cultivate the soil. Take tobacco leaves, cut them small, and make a strong infusion of them in hot water poured upon them in a large tub. The infusion must not be boiled, as that would carry off in steam a great part of the most valuable principle, the essential oil of the tobacco. When this infusion is cold, dissolve in it one or two pounds of common gum arabic; when the gum arabic is dissolved, a pound or more of flour of sulphur may be added, particularly if the infusion is intended to give a smart washing to wall-fruit trees. It is conceived that from January to March, if the weather is mild, is the best season for the application of this infusion to wall-fruit trees, and to all kinds of gooseberry and currant bushes, previously pruning all bushes, and weeding clean round the stems. Some days after the first washing with a watering-pot, or garden-engine, it would be beneficial to prepare a portion of the infusion with an additional quantity of the gum arabic, to be applied with a brush to the stems of the bushes, at least for a foot or more above the ground. The air of the atmosphere will generally keep the gum moist; and any vermin that may rise from the earth in the course of the spring, will be arrested by the gum, and the tobacco will kill them effectually. There is one species of grub that never quits the ground till he becomes a kind of butterfly. This species destroys cabbages and cauliflowers, by attacking the roots about an inch under the surface of the earth. It would, therefore, be proper, before these vegetables are hoed up, to give a small portion of the infusion to each plant from a watering-pot. And it is further recommended, when these plants are taken up to be transplanted, that their roots should be put in the infusion for a few minutes before they are dibbled into the earth. It is wonderful how this infusion promotes the vigour of vegetation, where it gets to the roots of any plant. Vipers, which are common in gardens in England, and the south of Scotland, will soon forsake gardens in which the said infusion is used freely; and the essential oil of tobacco, if applied to the mouth of a viper, upon the tip of a small rod, till it bites at the rod, will kill the reptile to a certainty. This oil will kill the most poisonous snakes of warm climates. The tobacco-leaf yields a considerable quantity of essential oil, which is readily obtained by smoking tobacco in a tube nipple-glass.

The oil will condense in the bulb of the nipple-glass; and it is so extremely caustic, that it will destroy the epidermis where it touches the human skin. It is peculiarly gratifying to observe, that the said infusion with gum arabic* and flour of sulphur, will be found a most important article to the farmer in the pickling of wheat or barley seed; and it is not necessary that the grain should be in the liquor above half an hour. The grain should be put in the infusion in large tubs; and when taken up, put in bags, and the bags to be suspended above the tubs until the infusion is entirely drained off. As soon as the liquor is fully drained off, let the seed-corn be spread upon canvass-sheets in the sun and air, if dry weather; but otherwise on the sheets on the barn floor. When spread upon the sheets to the quantity of four bushels, sprinkle over it two pounds of fine flour of sulphur, and rake the seed over and over again, to separate the grains. If the grains appear still to adhere to each other, it will be proper to add a little fine sand to make them separate freely for sowing. The destructive ground grub will not readily attack any seed pickled with this infusion, and the spring it gives to vegetation is astonishing.

[*Transactions of the Highland Society.*

LARGE OX.

There was lately exhibited at the Horse Bazaar, King-street, Portman-square, London, a remarkably large ox. This fine animal was of the Lincolnshire breed, and fed by Lord Yarborough. Live weight about 500 stone, 8 lbs. to the stone, (or 4,000 lbs.) and the admeasurement as follows:—67 inches to the top of the shoulder; 174 inches from the tip of the nose to the tip of the tail; 40 inches across the hips; 44 inches across the back; 41 inches across the shoulders; 135 inches in the girth; and 23 inches between the fore legs. The above ox has been seen by the Lincolnshire and Leicestershire graziers, and the best judges allow him to be 100 stone heavier than the Durham ox. He has also been inspected by the principal graziers in the neighbourhood of Warwick and Leamington, and is by them considered the largest, and to have the greatest proportion of meat upon the least bone, of any ox ever submitted to the public. [*Farmers' Journal, Eng.*

Fine Ox.—Lately was killed, at Sheffield, by Mr. J. Cardwell, an ox, (bred and fed by Mr Scott, of Torworth,) three years and six months old, weighing 116 st. 10 lb., 14 lb. to the stone, (1634 lbs.)—He was the most complete animal of his age ever killed at Sheffield. He gained the premium at the Doncaster cattle show, in 1821. [*Annals of Sport.*

MULES—PRIZE ESSAY.

Robert Oliver, esq. of Baltimore, having offered with his usual munificence, a premium for the best essay on the Natural History of the Mule, it has been awarded by a committee of the Maryland Agricultural Society, to a Dissertation on that animal, the author of which is Mr. *Samuel Wyllys Pomeroy*, of Brighton, Mass. and which is to be found entire in the number of the American Farmer for the 19th ult. The Dissertation is full, and equally curious and instructive. It proves that the mule is much preferable, on several important grounds, to the horse, for the purposes of husbandry, and for canal labour. [*Nat. Gazette.*

A kyloe cow, in the possession of Mr. Wolfe, Chester-le-street, Durham, (Eng.) has produced ten calves at six calvings: viz. four times two each, and two single calvings. [*Annals of Sporting.*

SHEEP.

A fat sheep exhibited by Mr. Grigg, at the late Bodmin cattle fair, was killed out of the county, and found to weigh 8 stone 2 lbs. per quarter, making the four quarters 264 lbs.

Two year old wethers, a cross between the Leicester and Cotswold, were killed at Ludlow, on the 6th of December, weighing nine stone per quarter, (8 lbs. per stone, making the four quarters 288 lbs.) being the heaviest recorded this season. Length, 3 feet 7 inches; girth, 6 feet 2 inches; fat on the rump 5½ inches thick; and they were altogether of the finest symmetry of any sheep the numerous judges recollect having seen for many years.—*ib.*

A clergyman, near Exeter, who has only eleven ewes, has now the inward satisfaction of seeing them suckle twenty-five healthy lambs. Three of the ewes produced three lambs each, and eight produced two each.—*ib.*

SPORTING OLIO.

TROTTING.

The three greatest attempts perhaps ever recorded of trotting, and on which thousands were pending, came on at Sunbury. Mr. Willan's horse, which beat the slate-coloured American, was backed to trot three miles in nine minutes, for 100 guineas. It had been reported that the horse was lame, and, up to the evening before starting, 6 to 4 was the betting on time, at the Tun-Tavern, and more than 2 to 1 was betted before starting. When at speed the lameness was not apparent, but the horse was more than three minutes doing the first mile, and there was no increase of speed during the match. The horse broke into a gallop near the George inn, when about 100 yards from home, and the pressure of horsemen was so great at his heels that the jockey turned him with difficulty, and the match was lost by 40 seconds.

One of the umpires reports, that "the first mile was completed 7 seconds under 3 minutes, which left 3 minutes and 12 seconds to do the last mile in. The horse kept a winning pace until within 100 yards of home, opposite the George public-house, where there is a sharp turning, when the horse broke, and was pulled up and turned. Here the crowd was so great, and he was so hemmed in, that he lost 12 or 13 seconds, and thereby the match exceeding the 9 minutes, was lost by 5 seconds." Mr. Dyson sold the horse, on Friday, for 300 guineas, to go to Ireland. There is no doubt but that on a straight three mile course he would have won easily. [*Annals of Sporting.*

PEDESTRIANISM.

On Tuesday, April 9, the travelling pedestrian last from Andover, undertook to run eighteen miles in two successive hours on Twyford Down, near Winchester, round a circle of a hundred and ten yards: he performed his task in five minutes within the stipulated time. His only reward was a voluntary subscription from the lookers-on.

The same man, last from Chichester, undertook to run 22 miles in two hours and three-quarters, on Tuesday, April 16, on a piece of ground in the high-road near South-sea-common, Portsea, which he did some minutes within the time, with ease.—*ib.*

Monday, March 19, a hackney mare of Mr Dixon, of Barbican, started at the four-mile stone on the

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* The principal use of the gum arabic is to carry the flour of sulphur into the soil attached to the seed.

Romford road, to trot 30 miles in three successiv hours, carrying Mr. J. Coxeter, weighing nearly 15 stone, [210 lbs.] Notwithstanding the heavy weight the mare carried, she performed the distance in 13 minutes and 27 seconds within the given time.

So long ago as 1785, a similar match was made to trot 30 miles in two hours and a half, and the accounts state that this was accomplished, leaving 4 minutes to spare.—*ib.*

TANDEM MATCH.

Mr. R. Houlston's match for fifty guineas, to drive tandem 15 miles in one hour, and to trot the first 7 miles, took place over a four-mile flat on the Bromley road. The horses did the first 4 miles in 18 minutes and 22 seconds, and the other 3 in 14 minutes and 8 seconds, leaving 27 minutes for the 8 miles' gallop. The horses did the 8th mile in 3 minutes 10 seconds, the next 4 in 13 minutes 12 seconds, and the remaining 3 miles in 10 minutes and 50 seconds, winning the match by 18 seconds. Betting was 5 to 2 on time.—*ib.*

RECIPES.

SUBSTITUTE FOR YEAST.

Mix two quarts of water with wheat flour, to the consistence of thick gruel, boil it gently for half an hour, and when almost cold, stir into it half a pound of sugar and four spoonsful of good yeast. Put the whole into a large jug, or earthen vessel, with a narrow top, and place it before the fire, so that it may, by a moderate heat, ferment. The fermentation will throw up a thin liquor, which pour off and throw away; keep the remainder for use (in a cool place) in a bottle or jug, tied over. The same quantity of this, as of common yeast, will suffice to bake or brew with. Four spoonsful of this yeast will make a fresh quantity as before, and the stock may be always kept up, by fermenting the new with the remainder of the former quantity.

CURE FOR THE GRAVEL.

A farmer by the name of John Neilson, states, in the Albany Daily Advertiser, that he has found relief from the gravel by drinking sweet cider for some weeks.

TO CORRECT THE VITIATED ATMOSPHERE IN BED CHAMBERS.

Small closets and concealed beds are extremely injurious, especially to young persons and invalids. When persons are from necessity obliged to sleep in them, it would be advisable every morning, immediately after rising, to displace all the bed clothes, and if the sky be serene, to open the door and windows. The various methods which luxury has invented to make houses close and warm, contribute not a little to render them unwholesome. No house can be wholesome unless the air has a free passage through it. For which reason, houses ought daily to be ventilated by opening opposite windows, and admitting a current of fresh air into every room. Beds, instead of being made up as soon as people rise out of them, ought to be turned down, and exposed to the fresh air from open windows through the day. This will expel any noxious vapour, and cannot fail to promote the health of the inhabitants.

The purity of air may be also restored by wetting a cloth in water mixed with quick lime, hanging it in a room until it becomes dry, and renewing the operation so long as it appears needful.

TO PRESERVE ROOTS.

These are preserved in different ways, according to the object in view. Tuberous roots, as those of the *dahlia*, *pæonia*, tuberose, &c. intended to be planted in the succeeding spring, are preserved through the winter in dry earth, in a temperature rather under than above what is natural to them. So may the bulbous roots of commerce, as hyacinths, tulips, onions, &c. but for convenience these are kept either loose on cool dry shelves or lofts, or the finer sorts in papers, till the season of planting.

Roots of all kinds may be preserved in an ice-house till the return of the natural crop.

After stuffing the vacuities with straw, and covering the surface of the ice with the same material, place on it case boxes, dry ware casks, baskets, &c. and fill them with turnips, carrots, beet roots, and in particular potatoes. By the cold of the place, vegetation is so much suspended, that all these articles may be thus kept fresh and uninjured, till they give place to another crop in its natural season.

TO PRESERVE VEGETABLES.

This is effected in cellars or sheds, of any temperature, not lower, nor much above the freezing point. Thus cabbages, endive, chiccory, lettuce, &c. taken out of the ground with their main roots, in perfect dry weather, at the end of the season, and *laid in*, or partially immersed in sand or dry earth, in a close shed, cellar, or ice-cold room, will keep through the winter, and be fit for use till spring, and often till the return of the season of their produce in the garden.

THE FARMER.

Baltimore, Friday, September 9, 1825.

Wool.—The Editor has received samples from thirty of the Saxony sheep, lately sold at Brighton, near Boston. The price for which each sheep sold is also marked on each sample. These specimens present a fine opportunity to those whom interest or curiosity may lead to observe the nice distinctions that are made by the manufacturer in the quality of this valuable staple.

☞A subscriber at Alexandria, wishes to know where the "TREE HILL" race course is. It is in Virginia, we believe, some where near Richmond.

Officers of the St. John's, Colleton, Agricultural Society, for the year 1825.

William Seabrook, Sen'r. Esq. President.
John R. Matthewes, Esq. Vice-President.
Dr. Edward Mitchell, Treasurer.
Dr. Isaac Auld, Corresponding Secretary.
John Jenkins, Esq. Recording Secretary.

Tobacco.—Amount of Inspections in the three state warehouses, during the last week:

Warehouse	No. 1, ...	100 hhds.
Do.	No. 2, ...	106
Do.	No. 3, ...	410—616.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9 50	10		
BACON, and Hams, . .	lb.	7	10	11	
COFFEE, W.I. Green, .	—	18	19	20	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	24	25		
Georgia Upland, . . .	—	20	22		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	33	33		
FISH, Herrings, Sus.	bbl.	2 50	2 62	2 75	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 75	5 00		
Fine, ...	—	4 25	4 87		
Susquehanna, superfi.	—	4 50	4 75		
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5			
GRAIN, Indian Corn, .	bush	50	53		
Wheat, Family Flour,	—	95	1 05		
do. Lawler, ...	—	90	95		
do. Red, ...	—	85	95		
Buckwheat, ...	—	55	75		
Rye, ...	—	45			
Barley, ...	—	50			
Clover Seed, Red . .	—	3 75		4	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1 50			
HEMP, Russia, clean, .	ton	200			
HOGS' LARD, ...	lb.	10	11		
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, Havana, .	gal.	34	37		50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	7		7½	8
NAVAL STORES, Tar,	bbl.	2 25	2 50		
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2	2 12		
OIL, Whale, common, .	gal.	27	29		
Linseed, ...	—	75			
PORK, Baltimore Mess,	bbl	14 50	16		
do. Prime, . . .	—	11	12		
PLASTER, cargo price,	ton.	5 38			
POTATOES, ...	bush	1 25			
RICE, fresh, ...	c.lb.	3 25	3 50		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	6	8	9	10
WHISKEY, 1st proof, .	gal.	23	25		
PEACH BRANDY, 4th pr	—	80	1 00		
APPLE BRANDY, 1st pr	—	32			
SUGARS, Havana White,	c.lb.	13 00	14 00		
do. Brown, . .	—	11 00	12 50		
Louisiana, ...	—	8 50	11 00		
Loaf, ...	lb.	19	22		
Lump, ...	—	16	18		
SPICES, Cloves, ...	—	80	95		
Ginger, Ground, . . .	—	7	8		
Nutmegs, ...	—	1 75			
Pepper, ...	—	17	18	25	
SALT, St. Ubes, ...	bush	40	42		
Ground Alum, ...	—	60	65		
SHOT, all sizes, ...	cwt.	8 50		9	
WINES, Madeira, L. P.	gal.	2 00	2 50	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50		2 00	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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AGRICULTURE.

DISEASES INCIDENT TO CATTLE IN GENERAL.

(Continued from p 195, American Farmer.)

DISEASES PECULIAR TO OXEN.

Oxen are subject to few maladies, exclusive of those incident to neat cattle in general, unless the effects produced in these animals by the ox-fly, breeze, or gad-fly, as it is variously termed, (the *Oestrus bovis* of Linnæus.) This insect has spotted wings, and a yellow breast; it is furnished with a long proboscis, armed with a sharp dart, inclosing two others within it. The gad-fly particularly infects oxen, in the backs of which these insects deposit their eggs, and in which the maggots are nourished during the month of June: throughout the summer they plague the cattle by means of their darts to such a degree, that they are often induced to rush into the water for relief, till the approach of night. It has been suggested that the production of these terrible insects might be greatly checked, if not prevented, by washing oxen and cows, (which are sometimes attacked by these vermin,) in the spring, with a decoction of tobacco, or any other bitter and acrid vegetable.

Such are the diseases incident to cattle, that are of most ordinary occurrence: for an account of the more dangerous maladies of inflammations of the liver and lungs, locked jaw, yellows, or jaundice. &c., we beg to refer our readers to Mr. Clater's work, above noticed.

DISEASES OF CALVES.

1. The *Cords.* This disease is chiefly prevalent in Scotland, where it attacks calves during the first days or weeks after they are produced, and proves particularly fatal to such as are fed by hand and confined; though, if they outlive five or six weeks, they are seldom in any danger. The disorder appears to be of a plethoric and inflammatory nature as the calves that die in consequence of it are extremely red, and the small leaders, or ligaments are much contracted, whence probably the disease has its name. With the view to prevent the occurrence of the cords, it has been recommended to purge off the meconium, or first excrement, by giving the calf a little of the mother's milk lukewarm, as early as possible, care being taken that no cold milk be given the animal for the first six weeks. And, in order to counteract or reduce such plethora, it will be advisable to turn them out every day for a few hours, as soon as possible after they are calved, in order that they may enjoy the benefit of full and free exercise in the open air; but where the weather or other circumstances may not allow this always to be done, (and especially as confinement is necessary to their speedy fattening,) the most effectual preventive of this mortality, will be frequently to take a little blood from them.

2. *Cough.* Where calves are exposed at too early an age to *all* the vicissitudes of the weather, before they acquire sufficient strength to undergo the changes of this climate, they are liable to take frequent colds: the consequence of which is a *cough,* that often proves fatal if it be neglected. For curing this malady, it has been recommended to pour half a table spoonful of spirits of turpentine into the calf's nostrils, which must be held upwards, in order that the turpentine may flow into the throat: at the same time the nose should be smeared with tar, and the animal kept within doors for a few hours, repeating this treatment as often as the cough is troublesome.

3. The *Gut tie,* chiefly prevails in the county of Hereford, where it is considered as the effect of an enormous method of castration, which causes a stoppage in the bowels, and brings on a mortification that speedily proves fatal. The symptoms are a total stoppage in the bowels, except a copious discharge of blood and mucus, accompanied by a violent fever, which occasions the calf to kick at its belly, lie down and groan. The gut-tie mostly affects calves, though they may live to be full aged, and yet be liable to a sudden attack of this distemper. The manner in which a cure is effected in the county above mentioned is, to make a perpendicular incision four inches under the third vertebræ of the loins, over the paunch or stomach, and to introduce the arm, in order to discover the part affected, the beast being kept, if possible, in an erect position, by the help of proper assistance. In order to remove the stoppage of the stomach occasioned by the *gut-tie,* and to carry off the fever, one ounce of senna, two ounces of cream of tartar, and four ounces of Glauber's salts, infused in two pints of boiling water, are given, with the addition of half a pound or pint of salad oil, the whole being worked off with gruel, in which mallows and alder bark have been infused.

4. *Scouring,* or *Looseness,* is generally the first malady that attacks calves; it is mostly, if not entirely occasioned by the inattention of the persons to whose care the sucklings are committed; and who often put them too soon to suck, allowing them to remain longer at the teat than is proper: too frequent change of milk will likewise produce this disease. As soon as the looseness is discovered, it has been recommended to stint the calf in its diet, and to give an egg, boiled hard and chopped small, by drenching, fasting; the use of which, once or twice, is asserted in most cases to effect a cure. And in the "Annals of Agriculture," vol. xix. a correspondent recommends a mixture of pulverized chalk and wheat meal, made into balls with gin, as a medicine which may be administered with safety.

5. The *Shoote* is a most fatal malady, to calves, which it generally attacks a few days after birth.—The usual symptoms are, first, a colic that is more or less violent, and is frequently very severe and dangerous, especially when it is contagious. This colic is terminated, and the calf relieved, by a discharge taking place from the bowels; though this sometimes proves fatal before the *shoote* appears. Secondly, a loathing and refusing of food, even previous to the discharge, which decreases and increases according to the duration and violence of the disorder. Where the *shoote* prevails, the cheapest, and perhaps the best medicine which has been generally administered by experienced breeders, is eggs and flour, properly mixed with oil, melted butter and aniseed, linseed, or similar mucilaginous vegetables; or, simply, milk well mulled with eggs, may be given to the distempered animal.

DISEASES OF SHEEP.

Sheep are subject to various disorders, of which, however, our limits allow us only to state those of most frequent occurrence; hence, we shall, for the present, briefly remark, that it may be easily ascertained whether these animals are in health, or diseased. by their agility and briskness; the clearness of their eyes, which, as well as their noses, are perfectly dry; by the sweetness of their breath; the coolness of their feet; regularity of perspiration; the fine red colour of their skin; soundness and firmness of their teeth; and by the uniform, unbroken texture of their wool.

1. *Blindness.* This affection of the eye is produced by exposure to cold, particularly in too moist or too elevated situations; and is occasioned by long continued fatigue, which will produce it, at any season of the year. It prevails chiefly in Scotland, where a cure is sometimes attempted ("Agricultural Report of the County of Perth," 8vo ed.,) by opening the angular vein of the eye, and holding the animal's head in an inverted position, so that some drops of blood may fall into the eye. This moderates the increased action of the vessels of that part, which is the immediate cause of inflammation; and also the blood, being so admitted into the creature's eye, will, in consequence of its mildness and warmth, produce emollient effects, which likewise contribute to promote a cure. This operation completely removes the white specks on the eye, and restores the sight; though some for this purpose pulverize a small quantity of glass, and blow it into the eye by means of a quill, open at both ends, which, by its friction, wears off such specks or scales. "But the enjoyment of ease will infallibly cure them in a space of time proportioned to the fatigue they underwent before."[*]

2. The *Blood* is a fatal malady to sheep, which often die suddenly in consequence of it: in less violent attacks the symptoms are, panting and heaving of the flanks, and standing still. It is produced by feeding on too succulent or moist pastures. The most effectual remedy is bleeding; after which the animal should be turned into a dry pasture, and a mixture of common salt and nitre, with bran, may be given to it.

3. *Dunt.* This disease is variously known by the names of staggers, giddy, vertigo, turn, sturdy, and bladder on the brain. It is occasioned by a vesicular collection of water in the head between the *dura* and *pia mater,* and uniformly produces a continual giddiness. The violently pulling of sheep by the ears, which are afterwards cut off, is said to have effected a cure: but the most frequent remedy is that of *trepanning;* a hazardous operation, which can only prove successful in the hands of skilful persons. In Saxony, several of the sheep-owners keep their lambs in the folds during their first year; having remarked, that such as are kept from the fields during that time, are very rarely attacked with this disorder. In Prussia, M. Lasteyrie states, that he had been assured, by many agriculturists, they had secured their flocks from the turn, by fastening a linen cloth covered with pitch on the heads of the lambs, previously to conducting them into the fields. This kind of cap, they maintain, prevents the intromission of the worm which the flies deposit in the frontal sinus, during the earliest youth of the animals. A fact so important as this, certainly deserves to be positively ascertained; we have, therefore, stated it for the consideration of our readers.

4. The *Flux* is a diarrhœa, or looseness, that attacks sheep which suddenly come to full feed, after having been stinted with food; though it is sometimes caused by their eating the plant known by the names of may-weed, mathen, or fetid chamomile, (*Anthemis cotula* of Linnæus.) In general, the flux is not attended with any dangerous consequences, and usually disappears in the course of a few days in dry weather. Should it, however, continue longer than a week, it will be proper to give them some well-dried, sweet hay, and a decoction of clover flowers, with the addition of a little barley meal—allowing them neither any salt, nor to feed on any saline plants near the coast. But it is evidently the farmer's interest to give these useful animals a regular supply of food, as the weakness occasioned by the flux must necessarily reduce their condition.

5. The *Fly.* This disorder is chiefly confined to sheep that are continually exposed in hot seasons, particularly in enclosed woody districts. The insects from which the disease derives its name, live among the wool, where they materially prevent sheep from thriving, from the severity with which they bite. Hence various remedies have been suggested, most of which, however, are in some degree injurious to the wool. Flour of sulphur, mixed up with butter, lard, or other unctuous substances, and rubbed in with the hand, have been found least hurtful to the quality of the wool; and the remedy, suggested by Sir Joseph Banks for the *scab* in sheep,

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[*] Hogg's "Shepherd's Guide," p. 118—1807.

may be applied in the present case. When, however, maggots are formed, they should be carefully scraped from the wound, to which turpentine and brandy, mixed together, may be applied. Mr. Marshall ("Rural Economy of the Midland Counties,") directs such maggots to be picked out with a knife, or otherwise removed, without breaking the coat, when a quantity of white lead is to be scraped among the wool, which being agitated, the powder is carried evenly down to the sore. But due attention must be given, that too much ceruse be not applied, as it will discolour the wool; while a small quantity prevents any farther injury from the maggots remaining among it, as it drives them away from the wound, the healing of which it promotes at the same time. Mr. Preist, an intelligent chemist of Norwich, has prepared a cheap liquid, that not only cures where the fly has already struck, but alsu prevents its future attacks. It has been very extensively and successfully used by the Norfolk sheep-farmers.

6. The *Foot-halt*, as its name announces, is peculiar to the feet of sheep. It is occasioned by an insect resembling a worm, two, three, and sometimes four inches long. It is indicated by lameness, which often increases to such a degree as to prevent the animal from grazing From pain and want of food the sheep languishes, till at length it falls a victim to the disorder, unless the worm be opportunely extracted.

As soon, therefore, as a sheep is observed to limp, the lame foot ought to be examined between the close of the claws, where the skin is found perforated, through which the worm has worked its passage upwards, between the external membranes and the bone. In order to extract the insect, it will be sufficient to move the claws in contrary directions, backwards and forwards, till the worm gradually makes its way to the surface. This simple expedient is far preferable to the operation of drawing out the insect, as in the last case there is always danger of its breaking off, and rotting in the leg of the sheep, the value of which will thus be materially injured. As the foot halt occurs more frequently in wet than in dry seasons, and generally in the spring and fall, but rarely in summer and winter, it may be prevented, in most cases, by pasturing sheep in dry and healthy grounds, rather than in low meadows or marshy soils. (*To be continued.*)

ON THE IMPROVEMENT OF OUR BREED OF HORNED CATTLE BY IMPORTATION.

(Concluded from page 194)

SHEEP WITHOUT HORNS.

Dishley, or New Leicester Breed.

Specific characters.—Heads clean, straight, and broad; bodies round, or barrel-shaped; eyes fine and lively; bones fine and small; pelts thin; wool long and fine, well calculated for combing, and weighing. upon an average, eight pounds per fleece, when killed at two years old. Fatten kindly and early, being admirably calculated for the market, thriving on pastures that will scarcely keep other sheep, and requiring less food than others. Tolerably hardy and vigorous.

The Dishley sheep are found chiefly in Leicestershire and the neighbouring counties, whence this breed is gradually dispersing through the kingdom.

Lincolnshire.

Specific characters.—Faces white; bones large; legs white, thick, and rough; carcases long, thin, and weak; wool fine and long, from ten to eighteen inches, weighing per fleece, when killed at three years, an average of about eleven pounds. Flesh coarse grained. Slow feeders, calculated only for the richest pastures. Constitutions tender. As its name implies, this breed occurs principally in Lincolnshire, and other rich grazing districts.

VARIETY I.

Teeswater Breed.

Specific characters.—Bones finer; legs longer; carcase more heavy and firm; back and sides wider than in the original breed; wool not so long as that of the preceding sort, weighing about nine pounds per fleece, when killed at two years old. Flesh finer grained, and fatter than the parent stock. Females singularly prolific, generally producing two, and often three lambs, each. Constitution weak. Slow feeders, suited only for the finest pastures, consequently less profitable than the smaller sized, but quicker feeding sorts of sheep Capable of great improvement, by crossing with New Leicester, or Dishley rams.

This race is bred chiefly in the extensive, fertile, sheltered, and enclosed tracts of pasture watered by the river Tees, in Yorkshire.

VARIETY II.

Cotswold, or Improved Gloucester Breed.

Specific characters.—In most respects resembling the parent breed, but superior. They are chiefly found in Gloucestershire. The wool is not so long as that of the original sort. The mutton is fine grained and full sized, and the breed is capable of great improvement by proper crossing.

Dartmoor, or Devonshire Natts.

Specific characters.—Faces and legs white; necks thick; bones large; backs narrow, but back bone high; sides good.

This race is principally confined to the moor, in the county of Devon, whence the sheep derive their name The wool is long, weighing upon an average nine pounds, when killed at two years and a half. This breed improves materially by crossing with the Dishley breed.

Herefordshire, or Ryelands.

Specific characters.—Faces and legs white; size small; carcase well shaped; wool very fine and short, growing close to their eyes, and weighing, when killed at four years and a half, upon an average, two pounds per fleece. Patient of hunger. Flesh fine grained Constitution tender, so as to require to be sheltered in winter. Very profitable, no breed being supposed capable of subsisting on so small a quantity of pasture as this sort requires.

South Down.

Specific characters.—Faces and legs grey; bones fine; neck long and small; low before; shoulder high, light in the fore quarter; sides broad; loin tolerably good; back bone rather too high; thigh full, and twist good; wool very fine and short, (the staple being from two to three inches in length,) weighing an average of two pounds and a half per fleece, when killed at two years old. Flesh fine grained, and of excellent flavour. Quick feeders. Constitution hardy and vigorous. Capable of great improvement The South Down sheep are principally bred on the dry, chalky downs of Sussex, whence this valuable breed is gradually being introduced into various districts.

SWINE.

Berkshire Breed.

Specific characters, &c.—Colour reddish, with brown or black spots; sides very broad; short legs; ears large, and pendant over the eyes; body thick, close, and well made. Kindly disposed to fatten, and attaining a large size, but can be kept only where a large and constant supply of food can be procured, otherwise they will dwindle away, and yield no profit. Flesh fine.

Chinese, or Black Breed.

Specific characters, &c.—Colour mostly black, though sometimes white, tawny or reddish, and brown; size small; neck thick; legs short; body thick, close, and well made. One of the most profitable sorts in this island; flesh delicate; fatten kindly on very indifferent food; but very mischievous if not well ringed.

Gloucester.

Specific characters, &c.—Colour white; size large; legs long, having two wattles or dugs pendant from the throat; carcase long and thin; skin thinner than that of the Berkshire sort; ill formed. A very unprofitable sort; found chiefly in Gloucestershire, Shropshire, and West Devon; supposed to have formerly been the only breed in Britain. Do not fatten so well, or so kindly, as the Berkshire breed.

Hampshire.

Specific characters, &c.—Colour chiefly white; neck and carcase long; body not so well formed as the Berkshire pigs; size large. Fatten kindly, and to a very great size and weight.

Highland, or Irish Breed.

Specific characters, &c.—Size small; bristles erect; ill shaped. Thrive very badly; prevailing chiefly in the Highlands.

Northampton Breed

Specific characters, &c.—Colour white; legs very short; ears enormously large, often sweeping the ground; size large. Fatten to a large size, but not very kindly; reared chiefly in the county of Northampton.

The *Shropshire Breed* appears to be a variety of the Northampton race, to whose characteristics it bears a great resemblance. The Shropshire swine fatten to a large size, but are not so kindly disposed as the Berkshire.

The Rudgwick Breed.

Is a peculiar sort of swine, reared at a village of the same name, on the confines of Surry and Sussex. These swine are very valuable, as they fatten kindly and to a vast size, weighing, at two years, twice or thrice the weight of other swine at that age.

Swing-tailed Breed.

The colour of this breed is various; its size small, but well proportioned. They are hardy; and fatten to a great weight.

Large, Spotted Wooburn Breed.

This is a new variety, introduced by the late Duke of Bedford; its size is large, and colour various. These swine are well formed, very prolific, hardy, kindly disposed to fatten, attaining nearly twice the size and weight of other hogs within the same given period of time.

COTTON.

Mr. Skinner,

Sir,—My recent speculations on the Cotton Market, and observations on the conduct of those prints that endeavoured to keep up a delusive speculation, are before your readers. Those who imagined there would scarce be "a Bale" at Christmas in Liverpool, will find upwards of 400,000, at least, if any dependance is to be placed on accounts from Liverpool to 23d June and 7th July, and opinions at N. York, given on the 8th August, all arising from actual documents and from which I have drawn the annexed tables "From Egypt" said the profound Editor of the National Gazette, "no fears are to be entertained;" however the progress of Egyptian Imports, from 1100 to 21000, and thence to 60 or 70,000 in 3 years, although it has fallen short of what was promised, would seem to speak otherwise.

It would, after Niles' Register,[*] (August 6, p. 361) had taken up the subject in so able a manner, be useless to add another word on the matter. Indeed, barring some extraordinary incident, the result of the shipments to Liverpool on U. S. account, will speak volumes, for, to the 400,000 expected and reasonably expected to be the stock on 1st January 1826, there is a large growing crop, such a crop as has rarely been seen.

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[*] It would have been more satisfactory to have Mr. N's authority for the 100,000 bales produced in the valley of Seres, in Macedonia. Seres is, I think, in Asia; and there I believe, D'Anville seems to think the ancients grew cotton, but called it silk. I write from memory, and may not be correct.

I am, &c.
AMPHICON.

S. Carolina, Sept. 1, 1825.

—

Import of Cotton into Liverpool, in

Where from.	1822.	1823.	1824.	1825.
U. States,	290,850	409,721	254,731	——
Brazils,	135,405	157,738	136,139	——
E. Indies,	1,999	7,915	14,163	——
W. Indies,	25,031	21,780	20,771	——
Egypt,	::::::::::	1,173	21,739	——
Total,	453,285	578,317	447,543	::::::::::
Into the whole Kingdom.				
All places,	532,722	668,470	540,574	865,000

Stock in Liverpool at the close of

Where from.	1822.	1823.	1824.	1825.
U. States,	86,400	186,200	61,750	——
Brazils,	42,500	53,100	34,800	——
W. Indies,	5,600	6,570	5,050	——
E. Indies,	18,500	15,130	14,200	——
Egyptian,	::::::::::	::::::::::	8,200	——
Total,	153,600	361,000	124,000	::::::::::
In all the ports.				
All places,	286,400	383,860	255,360	430,000

Import of U. States Cotton.

1823	409,721
1824	254,721
Deficiency,	155,000

Stock of U. States Cotton.

1823	186,200
1824	61,750
Difference,	124,450

Import of Cotton into Great Britain, till the 23d June in, 1825 and 1824.

Liverpool,	323,771	241,915
London, &c.	60,591	41,502
	::::::::::	286,417
More in 1825,	::::::::::	97,945
	384,362	384,362

Imports made, and expected to be made, into all the Ports to the 23d June, and 31st Dec. 1825.

U. States,	imported,	202,000	
	expected,	138,000	340,000
Brazils,	imported,	90,000	
	expected,	45,000	135,000
E. Indies,	imported,	36,000	
	expected,	24,000	60,000
Egypt, &c.	imported,	56,000	
	expected,	44,000	100,000
			625,000
Stock, 1st Jan. 1825.			235,500
			860,500
Consumption,		635,000	
Exportation,		35,000	670,000
Stock, 1st Jan. 1826.			190,500

Liverpool accounts of the 23d June, state that the U. States import, was only expected to be in the whole kingdom, - - - - - 340,000

The N. York papers of the 8th of August, state it will be, - - - - - - - - 560,000

Leaving a difference of	220,000
to which we may add the above,	190,000
and thus make the stock 1st Jan. 1826,	410,000

Another statement,

Imported, see the first statement,	865,000	
Stock 1st Jan. 1825,	235,000	1,100,000
Consumption,	635,000	
Export (which to 23d June, did not exceed 6000,)	35,000	670,000
Stock 1st Jan. 1826,		430,000

Comparative State,

1st Jan. 1826,		430,500
More in Jan. 1826, than	Jan. 1823	143,600
	Jan. 1824	50,140
	Jan. 1825	194,634

N. York American, 8th August, "the apprehensions of the cotton holders have been realized by a farther fall in price. As to future prices, much will depend on the quantity, *gone* and *to go*, that the export will exceed 500,000 is pretty well ascertained, perhaps 60,000."

The N. Orleans, &c. export will equal 250,000. Speculators calculated in February, the import would be 280,000, others went as far 340,000.

The statements are made from a letter from Liverpool, dated 23d June, and published in all the papers.

ALDERNEY COW.

Mr. J. S. Skinner, *Baltimore, 9th Sept.* 1825

Sir.—A pretty general opinion having prevailed that Alderney cattle are not quick feeders, nor of a size to be an object for graziers or victuallers, and a decided instance to the contrary having occurred with me, I deem the result not unworthy a place in your valuable journal.

You may recollect I became possessed of one of the Alderney cows, imported by Mr. James Creighton in 1819, she proved a superior mother, and for a few months after calving would give 18 quarts per day of the richest milk I ever saw, she was also the most docile, good tempered cow I ever knew, and always looked well on common food. Last fall she was permitted to go dry from a belief of her being in calf, and received no other food whatever all winter than hay; but in the spring symptoms were discovered of her having ceased to breed, (which proved to be the fact.) and in May last, she was put upon common pasture with some young cattle, and never had a feed of grain, but fattened so rapidly as to surprise all who saw her; and a few days since I prevailed upon Mr. John Rusk, (one of our most extensive victuallers,) to call and examine her, when he assured me she was uncommonly fat; and made an offer for her which I accepted. The result of her weight and description of food given is stated in the annexed certificates. The beef was of a yellow colour, close grained and of excellent quality. As this breed of cattle have somewhere been called *unthrifty and dwarfish*, I hope my statement will tend to dissipate such a mistaken idea, and confirm the favourable impressions of those who continue to repose confidence in them, for in spite of prejudice they are preserved pure in Baltimore county.

Yours, respectfully,
HENRY THOMPSON.

—

I hereby certify, that I purchased a few days since Mr. Henry Thompson's Alderney cow, nine years old, and slaughtered her on the 1st January. Considering her keep, I think her the most uncommonly fine beef I ever saw—she weighed as follows:

Nett, four quarters,	760 lbs.
Rough tallow, exclusive of suet,	140 "
Hide,	81 "
Head and tongue,	42 "
	1023 lbs.

JOHN RUSK

Baltimore, Sept. 3, 1825.

—

I hereby certify, that I had the care of Mr. Henry Thompson's Alderney cow ever since last fall, (when she went dry) until she was killed by Mr. J. Rusk, during which period she had no food what ever but hay and grass, nor did I ever know her to be fed with grain or roots of any kind.

THOMAS JOHNSTON.

Baltimore county, 3rd. Sept. 1825.

A heifer calf from the above cow, by an Alderney bull, was sold to Commodore Chauncey, and by him taken to the state of New York.

WHITE FLINT WHEAT—AGAIN.

[By the following, as well as former favours of our correspondents, the subscribers to this journal will see our anxiety and labour to collect the best information for their use, on the leading objects of their pursuit.]

Dear Sir, *Talbot, Sept. 8th*, 1825.

You some time since asked me what our farmers thought of the white flint wheat, and I have inquired of several who sowed small parcels of it. The general opinion is certainly favourable. It is a vigorous growing wheat, with a very strong, harsh straw. A gentleman of Virginia has expressed the opinion, that it is a fine sample of the Lawler. I thought so too, from the appearance of tho grain. But it is a better yielding wheat in rich and fresh manured lands; does not throw so much into straw, and ripens earlier—indeed, a fraction earlier than our favourite white wheat. With regard to the hessian fly, of its resistance or non-resistance, I can give you but one authentic instance. It was sowed on thin ground, manured and well prepared, under like circumstances, and alongside of a parcel having all the characteristics of red chaff bearded, except the difference of a white grain. Early in May both parcels were full of fly. The white flint undershot and very much recovered, the other was very much injured. Both parcels were alike subjected to the tremendous storm of the 4th of June. The red was beat down, so as to render the saving of what the fly had left extremely difficult; the flint stood up better than any other kind in the neighbourhood—and in this experiment the yield has been nearly double of the red. Another gentleman sowed 1½ bushels on corn ground, and surrounded by white wheat. The fly did not attack either materially; they ripened nearly together, and if any difference in crop to the eye, it was rather in favour of the white; soil very favourable to the growth of white wheat—yield of the white flint from the 1½ bushels, 29. I hear that a gentleman in the county who sowed 30 bushels of it, is so much pleased with it, that he keeps what he made, and is purchasing more for seed.

One gentleman, who sowed it late in October, had it to ripen off later, and to rust—and this is the only adverse opinion I have heard of here. The samples sent us were very mixed; and one barrel, I believe direct from Albany, turned out to be wholly red chaff.

Very respectfully, your obed't serv't,
TENCH TILGHMAN.

ANTIDOTE TO THE WEVIL.

Mr. Skinner, *Baltimore, Sept. 10th*, 1825.

During the life time of my worthy friend, the late Philip Thomas, esq. of Cecil county, Maryland, he communicated to me that any species of crawfish when in a putrid state, was an antidote to the mischievous and destructive insect, the wevil. A few crabs in a putrid state, I conjecture would have the same effect—they being put in different situations on the floor of a barn or warehouse, in a short time the wevil will disappear.

I have never made any experiment myself

With great respect,
Your most obdt. servant,
HENRY ALEXANDER.

WEATHER AND CROPS.

Washington county, Penn. Sept. 8, 1825.

J. S. Skinner, esq.

Dear Sir.—The summer just ended has been the warmest we have experienced for many years. The mercury has been at 1 o'clock, P. M. ten times above 90 deg. On the 19th July, it rose to 95 deg. The medium temperature of June was 84 3-10 deg.—July, 83 deg.—August, 82 7-10 deg.

Although the heat has been so excessive, we were highly favoured with refreshing rains and almost universal health. Rain fell on 32 days during the last 3 months to the depth of 12 6-10 inches.

Crops.—Wheat unusually fine; rye, good; oats, a middling crop; grass, good; corn, very abundant; roots and vegetables, abundant; apples, under half a crop; peaches, none.

WILD RICE.

Mr. Darby, the geographer, says, the most valuable vegetable production of Michigan and North-West territories, is the wild rice, (*zizania aquatica.*) It grows abundantly in the marshes, ponds, lakes, and rivers of these territories, and exists upon other streams and lakes in a greater or less quantity from Louisiana to the arctic circle. It vegetates spontaneously; the appearance is more beautiful than that of wheat, and the grain is sweet and nutritious A western writer describes it as "growing six or seven feet above the water, where the water is from one to seven feet deep, the stalk resembling the reed-cane of Kentucky, and the branches those of oats." Some Indian tribes live almost entirely upon this vegetable. In the narrative of Major Long's Expedition to the source of St. Peter's river, it is stated that the Chippewas chiefly subsist upon the wild rice, and the manner in which they obtain it is thus described: "They go in canoes, two men in each canoe, armed with long poles, into the rivers or lakes where it grows; one of the men with his pole turns down into the canoe the plant from one side, and the other threshes it until all the grain is separated from the stem. The same operation is performed on the other side—after which they remove the canoe to another place, and continue until they have obtained a supply. They often collect with ease from 20 to 30 bushels per day." The grain is subsequently dried, trampled under feet to separate the hull, and winnowed by stirring it in wooden platters exposed to a gentle wind.

FREDERICK AGRICULTURAL SOCIETY.

At a meeting of the Frederick county Agricultural Society, held at Talbott's city hotel, in Frederick, on Wednesday, the 10th of August, 1825—it was

Resolved, That for the purpose of encouraging domestic manufactures in Frederick county, this society will award premiums, for the following articles, at its cattle show, exhibition, &c., to be held in May or June next; the amount of premiums respectively, will be published hereafter.

For the best piece of broadcloth, not less than	10 yds.
For the best do. narrow do.	10
Best do. cassimere, ...	10
Best do. cassinet, ...	10
Best do. flannel, ...	12
Best do. blanketing, or pair of blankets	
Best coverlet.	
Best piece of carpeting, not less than	20
Best hearth rug.	
Best piece lindsey, . . . do. .	10
Best piece flaxen linen, yard wide, .	10
Best piece diaper . . . do. . .	10
Best piece tow linen, . . do. . .	15
Best piece hemp linen, . do. . .	10
Best pair knit woollen stockings.	
Best pair knit flax do.	
Best pair knit gloves, of any material.	
Best strand or grass hat or bonnet, full size.	
Best willow basket.	

The society intend awarding premiums for stock and farming utensils, as usual, a list of which will be made out and published, when a better state of the treasury is ascertained. The object in publishing at present, is with a view to give timely nutice to all persons, both manufacturers by profession and private families The society, therefore, anticipate a very interesting variety of domestic goods generally.

The society have elected Messrs. John McPherson, Richard Potts, George Baer, Sebastian Graff, and Joseph L. Smith, a committee in pursuance of the provisions of a part of the fifteenth article of the constitution, which are as follow: "that a standing committee of five be annually appointed to receive and examine specimens of fruits grown in the county, and make report of the specimens exhibited, to the next meeting of the society."

Mr. R Potts' office was determined upon as the place of deposit, for all fruit sent for the inspection of the above committee, where all persons having choice fruits of any kind, are hereby invited to send them, each in its respective season, for the purpose of furthering the general designs of the society.

JOHN McPHERSON, Pres't.
Henry Willis, Sec'ry.

HORTICULTURE.

ON THE CULTIVATION OF THE VINE.

By Mr. Brun-Chappuis, of Vevey.

(Translated for the American Farmer, from late numbers of the "Bulletin des Sciences.")

(*Concluded from p.* 197.)

ARTICLE IV.

Of the removal and change of Earth.

Some vine-dressers, even at Vaux, remove the earth only every two or three years. This method is pernicious, for the earth settled towards the bottom, especially in vineyards situated on a declivity, buries the lower vines, and, on the contrary, leaves those at the top part uncovered. Grapes cannot ripen on vines which are too much covered; moreover, so much earth being put against the walls, renders them liable to be washed in very rainy weather. I am, therefore, of opinion, that the earth should be renewed every year, during dry weather, and before the vines begin to shoot. The top row of the vineyard, that which is next to the wall, should be dug out before the earth is carried to it, and if that part of the vineyard requires to be manured, the manure must be applied before the earth has been changed, and not put on afterwards. By acting otherwise, the manure not being sufficiently covered, is dried up by the first heats, and loses its properties without any benefit to the vineyard.

ARTICLE V.

On the first Tillage.

This work should be commenced generally at the end of March, or at least in April; in my opinion it should not be done until the vines begin to shoot, particularly in vineyards of humid soils. Vineyards tilled too early, do not thrive like those which are tilled late; the cold rains which fall generally in this season, harden the earth. Nevertheless, a distinction should be made: if the vineyards are situated on a declivity, of a light and gravelly soil, they may be worked early without receiving any injury, and likewise be greatly benefitted by it, the earth having time to settle, and thus preserve the humidity which protects it from the heat of the summer, and of which it would be deprived were this operation performed too late, and in dry and hot weather. The depth in working them depends on the depth of the soil of the vineyard, which varies from 5 to 10 and 12 inches in the vineyards around Vevey. There should be two spadings on each spot, that the vineyard may be well cultivated. By the first spading the earth is turned; and at the second, the earth that remains at the bottom of the furrow is taken up, that all may be of an equal depth. The method of digging out the earth should not at all be adopted. They who do not turn up the earth at all, do still more injury—the vineyard is filled much sooner with pernicious weeds, and becomes, thereby, more difficult to keep clean during the year. By turning over the earth, a great part of the seeds of weeds is covered up sufficiently deep to prevent them from springing up again. If the surface of the earth is dry when the first tillage is given, the work will be better. To do this work to the best advantage, too many large spadings should not be made, particularly in vineyards on a declivity, where the earth should be prevented from falling below, as much as possible. Attention should be paid not to work them when the earth is wet, or when there is any appearance of rain; under such circumstances, it is extremely pernicious. A vineyard which will have been tilled sufficiently the first time, should be tilled very deep the second time, when dry, and immediately after the digging. If these precautions are not observed, the vines will only vegetate and turn yellow, and the produce will be comparatively inferior to those which have been cultivated well. They who are in the habit of digging too late, do wrong. A vineyard which is left too long in the state in which it is found generally before it is worked, is considerably retarded; it is deprived of all the influence which the vernal sun exercises over it, and of the benefit of the rains; besides the growth of weeds increases in the meantime, which injures very much the prosperity of the grape. Also, in doing this work too late, the probability is that it will be badly done.—The fear of injuring the grapes may prevent us from turning over the earth as it should be, and it may be added, that whatever precautions are taken, some of the grapes will be destroyed, and the branches which may be broken off will not the less, in this case, also diminish the crop, and deform the appearance of the vines. All the roots which are not sufficiently deep should be cut off, and not pulled up as many vine-dressers are accustomed to do. It is the custom at Vevey, to prop them, in giving the first tillage. In this case, the digger should be very careful that the props which he puts down, should not have their ends decayed; he should break off with his hand the decayed part, and put down the prop on the lower side of the vine, between the prongs. They should be put down solidly, by giving them some blows with the head of the spade, to strike them down. To know if it is sufficiently solid, take it by the top and draw it to you; if it springs back and returns to its place, it is a certain mark that it is sufficiently deep. On level vineyards, the props should be put down perpendicularly, and in vineyards on a declivity, they should be bent upwards according to the slope of the earth.

ARTICLE VI.

On the removal of the earth from the Roots.

I will only make a few remarks on this work, which is not performed in the vineyards about Vevey, but which I have attended to for many years in my vineyards, and which I see with pleasure adopted by my neighbours, on account of the advantages which result from it. This work is neglected, probably, because few are propagated, notwithstanding the great number of vineyards. The method of replanting the vineyard has been preferred to propagation by slips—for as soon as a vineyard is decayed, it can be renewed by the means of cuttings. This method possesses many advantages, especially that of making a good selection of cuttings, which conduces easily to obtain, in the end, a better produce. Opening the earth around the roots should take place very early.—This work is performed with a *bossoir*, (spade;) it consists in opening the earth about the bottom of the layers set the preceding years, particularly those of the last year, to ascertain if they have sent forth roots too near the surface of the earth; in this case, the labourer should be very careful to cut them. When this work is done early, it is attended with this advantage, that the sap will not run through the roots that are cut off; but if this is performed late, the layer becomes necessarily weakened. You should, likewise, in cleaning the roots, take off the buds where there are too many, which is commonly the case; you can, moreover, elevate the layer, in order to make it level with the other vines.

ARTICLE VII.

On stripping the Leaves, and Tying.

The first thing that should be observed in stripping, would be to remove all the useless buds. This work should be done as soon as the grapes are seen, and the buds are six inches long. The method of stripping the buds early, is infinitely preferable to that which most vine-dressers pursue—which is, not to commence until the spurious buds have grown to the injury of the good ones. It is well to observe, that when this work is performed early, some of the best buds are liable to be destroyed—but this evil is nothing in comparison to the great advantages they derive from the sap being furnished more abundantly, which makes them thrive. When this work is done late, the sap runs more freely, the cuts of the buds being larger and deeper than when it is done early. I repeat it, that stripping the buds in time is attended with invaluable advantages. Pruning (or stripping the buds,) consists in leaving no more than two branches on each horn (or crook,) unless they should have grapes. This exception is only applied to flourishing vineyards: for young vineyards should only have two branches on each horn. Not more than four to six branches should be left on each vine, provided there be no grapes. This thinning should not take place until the branches are tied with straw; for were this operation done sooner, the vineyard would be considerably injured by storms, frosts, hail, and other accidents They who thin, should be very careful in selecting the branches which they wish to cut. The one which is outside should be generally left, though it should not have any fruit. When the branches are long enough, they are fastened to a prop, which is called tying, or binding. When the grapes are in blossom, is the time to be selected for this work. They who tie them up too late, experience a considerable loss in their crop, the grapes already faded being exposed to the sun, fall partially. As soon as the grapes have faded, they require to be left perfectly still. When they are tied before they blossom, if the wood is long enough, they are not much injured, if it is not in plentiful grape-years, nor rainy ones. In plentiful years, the great number of branches being tied to props, keep the grapes shady and fresh; but then they blossom badly, and lose the blossom with greater difficulty, which causes a part of the fruit to fall. The worms destroy the grapes in the shade, more than those exposed to the sun. In cold and rainy years, you should not be too eager to bind them, but wait until they blossom. The grapes which are near the earth and more exposed to the sun, bloom more easily, and more quickly lose their blossom; which is not the case when the vine is tied before it blooms. Every thing that prevents and retards them in the losing their flowers, should be carefully avoided; for, if the grape keeps its blossom a long time, it is a proof that it will not thrive. It is best to observe a medium, which consists in commencing commonly when the grapes begin to bloom; but then you should be careful not to perform this work when the vines are wet, either with dew or rain. By not attending to this precaution, a great part, and perhaps half of the harvest, may be lost; especially if it is a delicate kind, such as the *Fendant Roux*.—Some vine dressers strip off the leaves very unseasonably, whilst, on the contrary, they should all be preserved as much as possible. To strip off the leaves, is in some measure to kill the vine. However, in rich vineyards, which produce a great deal of wood and large leaves, and where the grapes decay before they arrive at maturity, on account of great humidity, it would be well to nip off some of the leaves, particularly those which surround the central ones. There are small leaves found at the bottom of the stalk, which should always be nipped off, in order that the stalk of the leaf may remain fitted to the branch to nourish the bud, which should be cut the following year. Most vine-dressers make two or three stories to the prop with branches; they tie the smallest first, the middle next, and the largest last. This method of tying the vines, prevents them from thriving; the small branches which were tied first, are all the year under the shade of the large ones—the grapes remain green, and do not thrive as well as the largest, and, as I have already observed, the insects being thus protected, do much more injury. The proper way of tying, is to make one tie to each horn, fixing the small shoots to the larger branch, and this last to the prop: so that the number of ties on the prop will not exceed four. The advantage of this method is to throw all the grapes outside of the trellis, by which means they are better exposed to the influence of the sun. Besides, the topping is more easily performed, insects are no longer to be so much dreaded, the fruit ripens better and acquires a better flavour. Care should be had, not to tie the leaves with the branches, and still less, the grapes, which is but too often done. The branches must be well secured to the trellis, and not too near to their extremities.

ARTICLE VIII.

Of the Second Tillage.

Although this work appears of little importance, it presents likewise its advantages and deserves attention. Some vine dressers begin the second tillage as soon as they have tied the vine, others later when the grapes are ripening. As the second tillage is a work quickly done, it is advantageous to select a good time. The most favourable is when the blossoms have faded. Vineyards which receive the second tillage too soon are attended with this disadvantage, that the grapes do not thrive as well as in those which have had it at the proper time; they are more liable to disease in case of hail. They who give them the second tillage too late, when the grapes are ripening, are apt to do them a serious injury by bruising the grapes, notwithstanding every attention and care. In all cases this should be done in dry weather, if you wish to destroy the grass, except in vineyards of a flat and sandy soil, and exposed to the drought, which are the first to be tilled a second time, and, if possible, when the earth is a little moist. In those vineyards the second labour should not be too deep. If it is a fit season no risk is incurred by working them when the vineyard is in blossom; provided the labourer take precautions not to touch the grapes, especially if it is a late season. The earth should be well turned. The vines which have been worked badly in digging should receive the second tillage, very deep, and when it is dry. He who gives the second tillage, should keep all his earth from 4 to 6 inches in depth. Some vine-dressers will not permit their vines to receive a second tillage when the earth is dry, and the vineyard is in blossom. They pretend that the dust, which is made in working them a second time, settles in the blossoms and makes the fruit run. I was of this opinion myself; but, after having examined the thing more closely, I perceived it to be the result of prejudice. For if this were the case, the vines along the highways which are always covered with dust in dry weather, would not yield any fruit; but it is well known that they are as fine, at the time of vintage, in those places as in any other.

ARTICLE IX.

On Topping. (*Biochage, or Pincage.*)

This work should be performed immediately after the grapes have blossomed and have fruited, if it was not done at the time of tying them. It consists in removing all the wood which has grown between the leaves since they were trimmed, or which was forgotten the first time; and topping all the branches even with the prop, which should be 4 feet long. If the trellis be shorter, the branches should be left a little longer, and all that require it, tied successively. Vines which have not wood sufficiently long to reach to the top of the trellis, are tied without being topped; for it is important that the trellis should be covered, as well for the preservation *of the vine, as for its appearance.* If you put off this work till too late, great injury will be done to the annual produce, to the following one, and to the quality of the wine; the vine being exhausted by the length of the branches and the great number of suckers, the vine-branches cannot acquire that strength and thickness, which is the only guarantee of a good harvest the following year. In wet seasons the vine grows with much more luxuriance than in dry ones, they should therefore be topped and cleaned twice, if not thrice. With regard to vineyards which suffer from drought and where the leaves wither, I have consulted many experienced vine-dressers, and the most of them have told me, and I was of the same opinion myself, that they ought to be kept well topped, which causes the sap to return, and checks the disease; but I have seen it proved on the contrary, that when a vine is well covered with these long branches, it suffers less from the heat. Vineyards exposed to drought and where the leaves burn, should be worked in a dry season as soon as the leaves appear, which lessens their liability to suffer from drought. In general vines require to be topped every year. It is at this time, that the branches which were not done before, and where the vine-branches were too short, are topped.

Some vine-dressers top at the time of tying, or of removing the shoots that grow among the leaves, and others not at all; some find that it causes the sap to flow again into the interior, and thence to the fruit; others on the contrary, are of opinion that it is very advantageous. Having made several experiments on this subject, I have discovered that no injury will result from topping them as they are tied, if it is not such vines, as have not branches long enough to cover the trellis. With regard to these last you should wait till they have grown sufficiently to admit of this operation. It might be deferred later without any disadvantage, provided the topping be done after the grapes are formed. To return to the custom of early topping, have not all vine-dressers frequently seen branches broken by tying before and at the time of blossoming, and that notwithstanding the grapes were very fine and close?

ARTICLE X.

On Manuring Vines.

Every vine-dresser is well aware that if the vines are not manured, they will not produce well; it is very important therefore, to manure them. We will attend now to the manner of using it and the kind which suits each soil. 1st, in the spring, at the time of the first tillage;—2d, in the summer, when they are worked a second time;—and 3d, in autumn, after the vintage, are the seasons generally selected to manure the ground; they are equally good, provided the earth be not too moist nor the weather too dry. Autumn is however the most favourable season to do this work successfully. The manure which is buried in the ground should be well dried, it decomposes better than when it is wet. Those who cover it should take care not to press it with their feet. The method of carrying manure to the vineyard long beforehand, is very bad, for the quality of the manure becomes worse daily, if the weather is dry. Those who spread it beforehand even in autumn, with the intention of not covering it till the following spring, cause it to lose at least half its strength; those who bury it in the earth when it is wet, especially when it rains afterwards, injure seriously the vineyard and the two following crops;—this should be particularly attended to. All kinds of manure are not equally good for every soil; some even do more harm than good: for example—the manure of horses, sheep, or goats, if it is not well rotted, when buried in a light sandy soil, exposed to the drought where the leaves burn, would lose a great deal if the season were in the least dry. Cow and hog manure are better adapted to such soils; manure however, which is too much rotted, is not so favourable to vegetation. When the manure is in a state of fermentation, or immediately after, is the best time to put it in the earth. The manure of cows and sheep suits heavy and moist soils, and those vineyards which have a flat exposure. All vineyards do not require the same quantity of manure; soils which are naturally rich will not require manuring more than once in four years, and once in three years is sufficient for a light sandy soil. It is well to observe that too much manure is very injurious to the quantity of wine, the grapes rot much quicker, the branches are more brittle, and the wine cannot be so well preserved in cellars. If, instead of manuring the ground every three or four years, you would take the trouble to put every year the third or fourth of the same quantity of manure, you would find it much better; for by these means, the vines would always preserve the same strength and verdure.

ARTICLE XI.

Of the Grass which is destructive to Vineyards.

It is well known to every vine-dresser that grass in general is pernicious to vineyards, consequently care should be taken to destroy it. It injures the quality of the wine, is destructive to the produce of the vine, and causes it to decay much sooner than it otherwise would; the quality of the wine is injured by the freshness the vine receives from the grass, the sun not having the power of warming the earth, as in vineyards that are kept clean; grass too is destructive to the produce by receiving the nourishment from the soil which is only destined to assist the vegetation of the vine. The vine experiences a premature decay from the same cause, the manure, which is intended to make them more productive, being absorbed by these destructive plants. It is therefore of the utmost importance to vine-dressers to keep their vineyards clean, particularly when manure is very scarce. The best way to destroy the grass is to root it up with an iron rake, (rablois) after the vintage; by this means the vineyard will continue clean till the season for working it, at which time you will be well rewarded for having cleaned it, by the facility with which the labourers accelerate their work. The iron rake is well calculated for destroying the grass; with this instrument you can succeed much better than with the hand. Those who use it, may in some measure give a third working even before vintage; this can be done without touching the grapes, pulling up with the hand, the grass immediately under the vine. A sure means to get rid of these injurious plants, is, not to let the seeds ripen. At a certain period it would, perhaps, be very dangerous to pull up the grass; this is between the first working and the binding; for the branches of the vine being then very long, it is hardly possible to rake the vineyard without risking the loss of many of the branches. This work should not therefore be done, till immediately after they are tied.

ARTICLE XII.

Of Gardening in Vineyards.

At the commencement of my establishment, blind to my true interests and not being acquainted with the culture of the grape, I gathered annually from my vineyards about 5 or 7 bags of Indian corn, and 2 or 3 of beans. For some years past I have not planted a seed; and I am well convinced that the introduction of any kind of vegetable is prejudicial to a vineyard.

ARTICLE XIII.

Of Planting Vines in new ground.

Those who wish to plant a vineyard in a place where vines have never before grown, should choose cuttings from a good stock; the *petite blanchette* suits best. As cuttings generally succeed well in such soils, and give much wood, the blanchette is preferable, because it yields less wood and a greater abundance of grapes. If you wish to plant the vineyard in a meadow, field, or green turf, you must pay great attention to removing all the sods or stubble which you find there, before ploughing up the ground. For if they are buried it may alter the quality of the cuttings. In general, vineyards planted in new ground, do not yield as soon as in those where vines have formerly grown: in the former the vines grow large and yield but little fruit; but there is a means of making them produce well, by putting on manure which has gone through a fermentation. They must be pruned once or twice more than is usual, according to the strength of the stalk: by this means they will produce less wood and a greater abundance of grapes. When you perceive them beginning to lose their vigour, they are then to be pruned according to the method pointed out in the Article 3d, on pruning.

It were to be wished that all vine-dressers would imitate those who have the good habit of clearing the old stalks of moss: this useless plant retains moisture and freshness, and serves as a retreat for insects, these are so many causes which hasten the decay of the vine.

RURAL ECONOMY.

ON MAKING AND PRESERVING CIDER.

To the Editor of the Baltimore Patriot:

Sir,—Having had some experience in cider-making, and being satisfied that the following article is in all respects *true,* I respectfully ask you to insert it in your valuable paper, with a confident hope that it will be read by every farmer of Maryland. W.

(*From the National Ægis.*)

At the late Cattle Show of the Worcester Agricultural Society, the Rev. Joseph Goffe, of Milbury, one of its members, presented for the premium proposed by the Trustees, a barrel of Cider, of excellent taste and body. The cider was used at the table and was pronounced by competent judges to be worthy of the premium, which was adjudged to be paid, upon the requisite certificate of the mode of making and preserving it, being filed with the secretary. The reverend gentleman has since furnished the following useful and instructive communication upon the subject, which is now published, by order of the Trustees, for the notice and information of the public.

—

To the President and Trustees of the Worcester Agricultural Society.

Gentlemen,

Owing to the lateness of the time in which I entered the barrel of cider for premium at the Cattle Show in Worcester, occasioned by unexpected delays, I did not accompany it with an account of the manner in which it was made and preserved. I will supply that deficiency by transmitting to you the following statement.

It has, for many years, been a considerable object with me to make and preserve good cider in my house for family use. To obtain this desirable object, I have made several experiments; and I flatter myself, not wholly without success. It must be obvious to every one, upon the least reflection, that clean casks are essential to its preservation in a state fit to be used. Unless these are kept clean and sweet, it is impossible the cider preserved in them should be good. Dirty, musty casks, ruin a great portion of the cider that is usually made. My first attention, therefore, is turned to my casks; and my practice is, as soon as a barrel is emptied, to wash it thoroughly, then scald it; and after drying it in the sun for several days, to put it by, in some dry place, for future use.

My apples are of the common kind, partly natural and partly grafted. Those with which I make my best cider, are gathered about the middle of October, and laid on an open floor, where they are suffered to lie under a free circulation of air, until they become mellow. From the floor, the apples are taken to the mill and ground. For this part of the process, I always prefer a clear day, when the air is cool and dry, that the aqueous part of the juice may evaporate as much as possible. The pomace is suffered to be in the trough until the next morning, when it is put upon the press. This, I think, is essential to the goodness of the cider, as it serves to mellow it, and to give it a higher colour and richer flavour. And that these advantages may be increased, I choose to express the juice slowly, wishing to occupy the space of three days at least, to make a pressing of eight or ten barrels, or even of a less quantity. When removed from the press, the casks are placed in the open air, exposed as much as possible to the heat of the sun, where they are allowed to remain until the first fermentation ceases, and the liquor becomes clear and of a vinous taste. It is then drawn off, as free as may be on the lees, and put into clean casks in the cellar, when I add about one quart of the spirits of cider, usually called cider brandy, and when this cannot be procured, of N. E. rum, to each barrel. This, I believe, is the best use that can be made of these fiery spirits. Sometimes, in the latter part of March or beginning of April, I rack it off again, and add another quart of the same spirits, which preserves it from ever acquiring an unpleasant acidity, and improves its flavour and quality. The cider is then fit for use, and affords a pleasant and healthful beverage during the summer and succeeding autumn, and indeed may be preserved in the same state for several years with increasing advantage.

Such was the process in which the barrel of cider was made and preserved, which was used at your table on the late anniversary.

From the foregoing statement, it will be perceived, that it is an object with me to make as *little* cider as I can, consistently with saving the whole. Instead of adding water, even so much as to moisten the straw, as is too generally the practice, to increase the quantity, my endeavour is to diminish it as much as possible, by exposing the apples and the pomace, during the whole process, to a dry evaporating air, which carries off at least one-eighth or one-tenth part of the moisture, and the aqueous part of it, which is usually incorporated with the cider, and deteriorates its quality. Another object is to preserve *cleanliness* through the whole process. The floor, the cart, the mill and the press, and especially the casks, must all be clean and sweet. There is, perhaps, no kind of liquor which more easily acquires a taint from any unclean thing with which it may come in contact. The dirty and slovenly manner in which cider is too often made, and the more filthy casks into which it is put, destroy the goodness of this cheap and valuable beverage, and renders it unfit for use, except by that fallen class of beings usually called cider drinkers. I have tried several methods to improve the quality of cider, such as boiling, freezing, and leaching it through coarse sand, but without any success, except in the latter method, which, by speedily cleaning it from the floating lees, serves to preserve its flavour, and to prevent an untimely acetous fermentation. By the little experience I have, or care to have, in making and preserving cider, I am fully convinced, that such improvements might be made in preparing this domestic article, as to render the produce of our orchards equal, if not superior to the fruit of the vine. It is desirable that the attention of our agricultorists should be more turned to this valuable production of their farms. It might greatly increase their comforts at home, and add much to their resources by commanding a higher price in the market. And what must be still more interesting to the patriot and moralist, it might, in a measure, supersede the supposed necessity of those flaming importations, which are now ravaging our beloved country, and turning many useful citizens into madmen, paupers and fools.

The foregoing statement and remarks are submitted to your inspection and disposal, by

Your humble servant,

JOSEPH GOFFE.

Milbury, Nov. 1824.

SPORTING OLIO.

(From the Annals of Sporting.)

ON THE LENGTH OF GUN BARRELS.

Sir,—I venture to submit to your examination some remarks upon the length of gun barrels, which, as they are founded upon *experience*, may, perhaps, prove useful to my brother sportsmen. For some centuries, it was a generally received opinion, that the greater the length of the gun barrel, the greater the distance to which the shot would be thrown; or, in other words, the projectile force, or power of impulsion, would be found to increase precisely in the same ratio as the length of the barrel. And under this hasty and erroneous impression, gun barrels, all over the world, were increased to an enormous length. Among the Montenegrins, the Albanians, and other semi-barbarous people, very long barrels still continue to be used in preference; and, even in this country, it is not an uncommon sight, in the fens of Lincolnshire, and the swamps of Lancashire, where wild fowl shooting is practised, (chiefly by the rustics,) to see guns of such enormous lengths as to require a *rest* to fire them from, as it would be impossible to hold them steadily to the shoulder. I am not aware of any treatises that have been lately written on the length of the gun barrel, either in England or on the continent; though experiments have been tried for the purpose of establishing some rule, by which an opinion might be formed, supposing mathematical precision to be not altogether attainable.

This point has not been yet decided; but enough has been done to show that very long barrels, so far from increasing the power of impulsion, will not carry nearly so far as barrels considerably shorter. From a conviction of the comparative inefficacy of long barrels, I some years ago cut four inches from the barrel of a fowling-piece, which was originally two feet ten inches long, by which I found the force of the discharge considerably increased. I then proceeded to shorten it, inch by inch, till I had reduced the barrel to two feet two inches, and uniformly found the power of impulsion increased. I have since tried the same experiment on two other fowling-pieces, with precisely the same results. I reduced none of them, however, lower than two feet two inches; and, consequently, did not ascertain how much farther the reduction could have been carried with success—but this sufficiently demonstrated the erroneous opinion, so long entertained, respecting the length of the gun barrel. The three fowling-pieces which I cut were of the general calibre: if the width of the bores were to be much increased, in all probability a greater length than two feet two inches might be found to increase the force. If we examine great guns or cannons, it will be found that the longest cannon is not nearly so long, comparatively, as the shortest fowling-piece—that is, taking into consideration the very wide difference in the calibre of the two. In making experiments, with a view to obtain precision as to the length of the barrel, due regard must be had not only to the strength of the gunpowder, but also to the state of the atmosphere.

Yours, &c. T.

THE ROAD TO HEALTH—OR, A PHYSICIAN'S OPINION OF HUNTING.

No persons (it has been observed by an eminent physician,) more strikingly illustrate the importance of bodily exercise than that class of *bons vivans* who, with a luxurious mode of living, combine amusements which consist in strenuous and almost indefatigable exertions. The *sportsman* works as hard for pastime as the ordinary day-labourer is obliged to do for his bread. The toils of both are equally arduous, and differ only in the one being a matter of choice, the other of necessity. The unwholesome pleasures of the table are, in a manner, compensated by the salutary enjoyments of the chase. An evening of noisy and jovial intemperance not unusually crowns a day of equally jovial and noisy activity; and a man will often be found, for a long time, to escape the dangers of the field, and the still more imminent dangers of a festival. The follower of the hounds is *on the road to health*, although he may not be in search of it, and if it were not for the excesses which are too frequently connected with this manner of life, it might prove singularly conducive to vigour and longevity. As it is, however, the fox hunter seldom dies of a broken neck, to which he seems continually liable, but very generally of a broken constitution, to which his habits in the field by no means contribute. He always stands out longer than the sedentary or indolent debauchee, though he may yield at last to the destructive power of licentious indulgence.

Coxe states, in his history of the Bourbons of Spain, that hunting first became a royal amusement, or at least was more cultivated as such, in consequence of its having been professionally advised, as an antidote to the *hypochondriasis*, to which that august family were continually liable. To this the pithy observation of Dr. Sydenham may be added: "I have frequently seen broken-up spirits and apparently reduced constitutions restored to strength and cheerfulness, by *horse exercise*, when almost every other method of recovery had been tried without advantage. To many of my nervous and bilious patients, I have recommended it as almost my sole prescription—'to live on horseback.' "

MISCELLANEOUS.

ON THE DELETERIOUS CONSEQUENCES OF THE USE OF TOBACCO.

Being once intimate with an eminent Attorney, I had occasion to call on him—When I entered his room he was absorbed in study, I took the liberty to ask of him what occasioned his occupation so studiously as he appeared to be engaged; he observed that *Tobacco and its effects* occupied his mind, and that he was searching into every author relative to the effects of Tobacco. He then drew a conclusion, and told me the effect of Tobacco was poisonous, acting like opium, and added that his daughter laboured under mental derangement from the excessive use of Tobacco. Her commencement was by using it in the powdered state as a dentifrice, (and there is no doubt but that powdered Tobacco cleanses the mouth and teeth;) using it in this way caused it to become necessary in another respect. The effect was like the prepared opium, which is so extensively used by the Chinese, and natives of India; habit makes it necessary to their existence, so it is with Tobacco when used in a powdered state by females. In the first instance it is used as a cleanser of the teeth, but the effect steals on them until they cannot do without it. In secret they fly to it when their spirits become low, and it causes a comfortable feeling; but like effects of spirituous liquors or laudanum, the dose must be increased, and goes on to such an extent as brings around destruction or insanity, let the constitution be ever so robust. I subscribe my name and know what I have developed to be true.

HENRY ALEXANDER.

Baltimore, Sept. 10, 1825.

A young and blooming heiress of Staffordshire, worth 50,000 *l.*, has eloped, it is said, with a young apothecary of Uttoxeter. Notwithstanding an ardent pursuit, the happy pair reached the Gretna temple in safety.

A dispute having arisen between two brewers, they both fell, while fighting, into a copper of boiling water, and were scalded to death.

The Enterprize steam packet had proceeded on her voyage to India; her passage, it was expected, would be performed in eleven weeks.

The duty on tobacco is now 3*s.* per lb. for home consumption, instead of 4*s.* per lb., in consequence of the omission to renew the customs war duty act.

We understand, says a London paper, that an allowance of 75,000*l.* will be made to the dealers who have paid the original duty since the 5th July last.

In the week previous to the 11th ult., no fewer than *twenty* vessels arrived at the port of Liverpool from New York, and from the United States in all *forty-five*.

The arrangements for the expedition to the interior of Africa, were completed. Captain Clapperton would soon set out, accompanied by Captain Pierce, and Mr. Dickson as a medical attendant.

RECIPES.

TO PRESERVE GRAPES.

Where there are several bunches in one branch, it may be cut off, leaving about 6 inches in length or more, of the wood, according to the distance, between the bunches, and a little on the outside of the fruit at each end; seal both ends with common bottle wax, then hang them across a line in a dry room, taking care to clip out with a pair of scissors, any of the berries that begin to decay or become mouldy, which, if left, would taint the others. In this way grapes may be kept till February; but if cut before the bunches are too ripe they may be kept much longer.

Grapes may be kept by packing them in jars (every bunch being first wrapped up in soft paper,) and covering every layer with bran, well dried, laying a little of it in the bottom of the jar; then a layer of grapes, and so on, a layer of bran and of grapes alternately, till the jar is filled: then shake it gently, and fill it to the top with bran, laying some paper over it, and covering the top with a bladder tied firmly on to exclude the air; then put on the top or cover of the jar, observing that it fits close. These jars should be kept in a room where a fire can be kept in wet damp weather.

EXTRACT OF MALT.

The following method of making the extract of malt, has been found very efficacious in allaying a troublesome cough, and in spitting of blood; and, if taken in time, would prevent a pulmonary consumption.

Let a peck of the best malt be ground and put into an earthen pan; pour 6 quarts of boiling water over it, stir it well and cover it up close. Let it stand 28 hours; after which, strain it through a clean coarse cloth; then put it into a preserving pan over a gentle fire, stirring and skimming it all the while. Let it boil till it comes to a syrup that ropes, and is as thick as treacle. Put it into galley-pots, and when cold cover it up close. A tea-spoonful of this may be taken in a morning, fasting, and at night going to bed; and at other times when the cough is troublesome.

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER 16, 1825.

WASHINGTON WHITE WHEAT FOR SEED.

Those who would supply themselves with seed wheat of superior quality, may procure it from W. Cooke, Esq. who has for sale, wheat of the above description, of the crop of Tench Tilghman, Esq. whose care and success in preserving his white wheat in a state of great purity and perfection is well known.

The Ladies' department will be filled, we hope, to their taste, in the next number. As our requisitions will be chiefly upon English works, some allowance is to be made for difference of climate.—Many flowers that bloom and flourish spontaneously in our southern country, require, in England, all the warmth and care of the green-house.

Home-made Wines.—Since we are accused, without foundation, of denouncing home-made wines, we have a right to assert, that if *particular* attention has been paid in this journal to any one subject more than another, it has been so paid to pointing out the best kinds, and the best method of cultivating the vine, and of making wine. The present and previous volumes *abound* in proof of this. To get prepared a translation of a most valuable essay on the cultivation of the vine, which we are now publishing. from a late number of the Baron Ferrusac's *Bulletin des Sciences*, has cost us more pains than it does some people to make a book. The fame of Major Adlum's vineyard and his wine, and the existence of the pamphlet he has published on the subject, have been proclaimed through this journal, in every state in the Union. We have always admired his zeal, as we should that of every one who perseveres in endeavours to open, and to demonstrate the profits of a new branch of industry—but we have not gone "a tilting" against all those who believe that we are not yet capable of supplying ourselves advantageously with wines of fine qualities; nay, we have so far ventured, *contra bonos mores*, as to let in the declaration of a playful correspondent, that "home-made wines, whether of grapes or gooseberries, persimmons or parsnips, were fit for any thing, but to drink"—and here is the "head and front of our offending."

Sports of the Turf.—The Norfolk steam boat brought up on Tuesday last, two celebrated Virginia horses—Henry and la Fayette. They are going, it is said, to New York, to run match races.

Tobacco.—Very little improvement has occurred in the prices of tobacco of the *highest quality*—but all of middling and inferior qualities of Maryland tobacco, have improved at least 20 per cent. within the last month. Within a few days, 48 hhds., part of the crop of R. W. Bowie, of Prince George's, of "red" quality, sold for 10 dollars per hundred round. Yesterday brought advices four days later from Europe; these, we understand, represent what (in the phraseology of the market,) is called "a calm"—and are not calculated to advance or depress the present prices.

Amount of Inspections in the state warehouses, during the last week—410 hhds.

MERINO SHEEP—FOR SALE.

The subscriber offers for sale, a flock of between six and seven hundred fine, young, and healthy Merino Sheep. W. H. FITZHUGH.

Ravensworth, near Alexandria, D. C.
Sept. 11th, 1825.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9 50	10		
BACON, and Hams, . .	lb.	7	10	11	
COFFEE, W.I. Green, .	—	18	19	20	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	24	25		
Georgia Upland, . . .	—	20	22		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	6	8	10	12
FEATHERS, Live, . . .	—	33	35		
FISH, Herrings, Sus.	bbl.	2 50	2 62	2 75	
Shad, trimmed,	—	6	6 50		
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 75	5 25		
Fine, ...	—	4 25	4 37		
Susquehanna, superfi.	—	4 50	4 75		
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	4 50		5	
GRAIN, Indian Corn, .	bush	53	56		
Wheat, Family Flour,	—	95	1 05		
do. Lawler, ...	—	90	95		
do. Red, ...	—	85	95		
Buckwheat, ...	—	55	75		
Rye, ...	—	50			
Barley, ...	—	50			
Clover Seed, Red . .	—	4 75	5	5 25	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1 50			
HEMP, Russia, clean, .	ton	200			
HOGS' LARD, ...	lb.	10	11		
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	22	24		
MOLASSES, W. India,	gal.	34	37		50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 8a20d.	lb.	7		7½	8
NAVAL STORES, Tar,	bbl.	2 25	2 50		
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2	2 12		
OIL, Whale, common, .	gal.	27	29		
Linseed, ...	—	75			
PORK, Baltimore Mess,	bbl	14 50	16		
do. Prime, . . .	—	11	12		
PLASTER, cargo price,	ton.	5 38			
POTATOES, ...	bush	75	1 00		
RICE, fresh, ...	c.lb.	3 25	3 50		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	6	8	9	10
WHISKEY, 1st proof, .	gal.	28			
PEACH BRANDY, 4th pr	—	80	1 00		
APPLE BRANDY, 1st pr	--	32			
SUGARS, Havana White,	c.lb.	13 50	14 00		
do. Brown, . .	—	11 00	11 50		
Louisiana, ...	—	8 50	11 00		
Loaf, ...	lb.	19	22		
Lump, ...	—	18			
SPICES, Cloves, ...	—	80	85		
Ginger, Ground, . . .	—	7	8		
Nutmegs, ...	—	1 75			
Pepper, ...	—	17	18	25	
SALT, St. Ubes, ...	bush	40	42		
Ground Alum, ...	—	50			
SHOT, all sizes, ...	cwt.	8 50		9	
WINES, Madeira, L. P.	gal.	2 00	2 50	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	3	8		
Port, first quality, . .	gal.	2 00		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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AGRICULTURE.

GENERAL OBSERVATIONS

ON BUYING AND STOCKING A FARM WITH CATTLE.

"The benefit," observes that enlightened agriculturist, Mr. Young,[*] "to be derived from the occupation of land, depends so much on the farmer commanding the requisite capital, that it is extremely necessary for the young beginner to be well advised on this essential point." Assuming it therefore, as certain, that such a beginner is provided with that indispensable requisite, we shall proceed to state a few general hints on the buying and stocking of his farm with cattle; and shall introduce, under the respective accounts of rearing and breeding the different species, such remarks on their various merits and demerits, as will materially assist him in the course of his labours.

The first object of attention, then, is to consider the proportion between his stock, and the quantity of feed which will be necessary to support them. The nature, situation, and fertility of the soils that compose his farm, are equally worthy of notice, as well as the purpose for which he designs more particularly to rear or feed his cattle; whether for the pail, or with the view of supplying the markets. In fact, it will be expedient to observe the greatest exactness in this proportion, because, in case he should overstock his land, his loss will be certain and great; while, on the other hand, he will incur a diminution in his profit, if he should not stock his land with as many cattle as it will bear.

Formerly, a great prejudice prevailed in favour of big-boned, large beasts; but it has been ascertained that this breed is, in point of profit, much inferior to the middle sized kind; and, by a careful attention to the selection of stock, no inconsiderable progress may be made towards the improvement of the different species. Among the various professional breeders of modern times, few have attained greater celebrity than the late Mr. Bakewell, of Dishley, to whom we are indebted for many new and important improvements in the science of rearing cattle. The principle which he invariably adopted was, to select the best beast, that would weigh most in the valuable joints; so that, while he gained in point of shape, he also acquired a more hardy breed; and, especially by attending to the *kindliness* of their skin, he became possessed of a race which was more easily fed and fattened than any other.

Till within a few years, the invariable practice was to judge by the *eye* only, without regarding the other qualities of the animal intended to be purchased; but, in the present improved age, a more rational mode of forming the judgment is adopted.—The sense of touch is now brought in aid of the sight; and, by repeated practice, the art of judging of the kindliness to fatten has been brought to such perfection, that any well informed breeder, who has *personal* experience, can, on examining lean beasts, tell, almost instantaneously, in what points or parts they will, or will not fatten.

In the selection, therefore, of live stock in general, the young farmer will find it necessary attentively to consider the following particulars:

1. *Beauty, or symmetry of shape;* in which the form is so compact, that every part of the animal bears an exact consistency, while the carcass should be deep and broad, and the less valuable parts (such as the head bones, &c.) ought to be as small as possible.[†] For working cattle, more particularly, Mr. Marshall states the following proportions as being essentially necessary, viz: That the neck be thin and clean, to lighten the fore-end as well as to lessen the collar, and make it sit close and easily on the animal while employed in draught. The carcase should be large, the bosom broad, and chest deep; the ribs standing out from the spine, both to give strength of frame and constitution, and likewise to admit of the intestines being lodged within the ribs. Further, the shoulders ought not only be light of bone and rounded off at the lower point, that the collar may sit easily, but also broad, to impart strength; and well covered with flesh, that the animal may draw with greater ease, as well as to furnish a desired point of fattening cattle. The back also ought to be wide and level throughout; the quarters long, the thighs thin, and narrow at the round bone. The legs ought, below the knee and hock, to be straight, and of a moderate length; light boned; clean from fleshiness, yet having joints and sinews of a moderate size, for the united purposes of strength and activity. In these points all intelligent breeders concur; but, as beauty of shape too often depends on the caprice of fashion, it is more requisite to regard.

2. *Utility of form*, or that nice proportion of the parts to which Mr. Bakewell bestowed so much attention, and which has already been noticed.

3. The *flesh*, or texture of the muscular parts; a quality which was formerly noticed only by butchers, but the knowledge of which the enlightened farmers or breeders of the present day, have not blushed to acquire from them: although this quality necessarily varies, according to the age and size of cattle, yet it may be greatly regulated by attention to the food employed for fattening them. As a knowledge of this requisite can only be acquired by practice, it is sufficient to state, that the best sign of good flesh is that of being *marbled*, or having the fat and lean finely veined, or intermixed, when the animals are killed; and, while alive, by a firm and mellow feel.

4. In rearing live stock of any description, it should be an invariable rule to breed from small-boned, straight-backed, healthy, clean, kindly-skinned,[*] round-bodied, and barrel-shaped animals, with clean necks and throats, and little or no dewlap; carefully rejecting all those which may have heavy legs and *roach* backs, together with much appearance of offal. And, as some breeds have a tendency to generate great quantities of fat on certain parts of the body, while in others it is more mixed with the flesh of every part of the animal, this circumstance will claim the attention of the breeder as he advances in business.

5. In the purchasing of cattle, whether in a lean or fat state, the farmer should, on no account, buy beasts out of richer or better grounds than those into which he intends to turn them; for, in this case he must inevitably sustain a very material loss, by the cattle not thriving, particularly if they be old. It will, therefore, be advisable to select them, either from stock feeding in the neighbourhood, or from such breeds as are best adapted to the nature and situation of the soil.

6. *Docility of disposition*, without being deficient in spirit, is of equal moment; for, independently of the damage committed by cattle of wild tempers on fences, fields, which inconvenience will thus be obviated, it is an indisputable fact, that *tame beasts require less food to rear, support and fatten them*—consequently every attention ought to be paid, early to accustom them to be docile and familiar.

7. *Hardiness of constitution*, particularly in bleak and exposed districts, is indeed a most important requisite; and, in every case, it is highly essential to a farmer's interest to have a breed that is liable neither to disease nor to any hereditary distemper. A dark colour, and in cattle which are kept out all the winter, a rough and curled *pile*, or coat of hair, are, in the popular estimation, certain indications of hardiness; but it is obvious to every thinking person, that this quality, though in some respects inherent in particular breeds, depends, in a great measure, upon the method in which cattle are treated.

8. Connected with hardiness of constitution, is *early maturity*, which, however, can only be attained by feeding cattle in such a manner as to keep them constantly in a growing state. By an observance of this principle, it has been found that beasts and sheep, thus managed, *thrive more in three years*, than they usually do in *five*, when they have not sufficient food during the winter, by which, in the common mode of rearing, their growth is checked.

9. A *kindly disposition* to take fat on the most valuable parts of the carcass, at an early age, and with little food, when compared with the quantity and quality consumed in less fertile situations, by which means the supply will be greater for the consumer. On this account, smaller cattle are recommended by C. G. Grey, Esq., ("Letters and Papers of the Bath and West of England Society," vol. x. p. 262,) as generally having a more natural disposition to fatten, and as requiring, proportionably to the larger animal, less food to make them fat; consequently, the greater quantity of meat for consumption can be made per acre. "In stall feeding," the nature, method and advantages of which will be stated in a subsequent chapter,[*] he remarks that, "whatever may be the food, the smaller animal pays most for that food. In dry lands, the smaller animal is always sufficiently heavy for treading; in wet lands, less injurious." And as to milk, he is decisively of opinion, that the smaller animal produces more goods for the food she consumes, than those of a larger size.

10. *The hide* of cattle is also worthy of notice—as, by the simple touch, both butchers and graziers are enabled to judge of their disposition to fatten. Sir John Sinclair has justly remarked,[†] that "when the hide or skin feels soft or silky, it strongly indicates a tendency in the animal to take on meat; and it is evident, that a fine and soft skin must be more pliable, and more easily stretched out to receive any extraordinary quantity of flesh, than a thick or tough one. At the same time, thick hides are of great importance in various manufactures. Indeed, they are necessary in cold countries, where cattle are much exposed to the inclemency of the seasons; and in the best breeds of Highland cattle the skin is thick in proportion to their size, without being so tough as to be prejudicial to their capacity of fattening."

11. *Working*, or an aptitude for labour: a point of infinite importance in a country whose population is so extensive as that of Britain, and where the consumption of grain by horses has so material an influence on the comforts and existence of the inhabitants. As, however, there is a difference of opinion on this subject, the reader is referred to the fifth section of this chapter, where the question is fully discussed.

12. Whether kine be purchased for the plough, or for the purpose of fattening, in addition to the essentials already stated, it will be necessary to see that they are young, in perfect health, full mouthed, and not broken either in tail, hair, or pizzle; that the hair *stare* not, and that they are not hide-bound; otherwise they will not feed kindly. The same remark is applicable to cows intended for the pail, the horns of which should be fair and smooth, the fore-head broad and smooth, udders white, yet not

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[*] Farmer's Calendar, ed. of 1804, p. 481.

[†] Sir John Sinclair's "Hints regarding Cattle," in the Farmer's Magazine, vol. iii. p 154.

[*] As this word may probably often appear in the course of the subsequent pages, it may not be altogether irrelevant to state, that it implies a skin which feels *mellow*, i. e. soft, yet firm to the touch, and which is equally distant to the hard, dry skin, peculiar to some cattle, as it is from the loose and flabby feel of others.

[*] Chap. III. Sect. II.

[†] "Hints regarding Cattle," p. 157, &c.

fleshy, but thin and loose when empty, to hold the greater quantity of milk, but large when full; provided with large dug-veins to fill it, and with four long elastic teats, in order that the milk may be more easily drawn off.

13. *Age.* Beside the rules above stated, there are some particulars with regard to the age of neat or black cattle, and sheep, which will merit the farmer's consideration.

"Sheep, in general, renew their first two teeth from fourteen to sixteen months old, and afterwards every year, about the same time, until they are turned three years old, or rather *three shear*, to speak technically, when they become full-mouthed; for, though they have eight teeth in the under jaw before, I believe they only cast or renew the six inside ones.[*] But, with regard to this point, there is a difference of opinion among experienced shepherds, some of whom conceive that they cast only six, while others think that they renew the whole eight fore teeth.

"Neat cattle cast no teeth until turned two years old, when they get two new teeth; at three they get two more; and in every succeeding year get two, until five years old, when they are called *full-mouthed*, though they are not properly full-mouthed until six years old, because the two corner teeth, which are last in renewing, are not perfectly up until they are six."[†]

The horns of neat cattle, also supply another criterion by which the judgment may be assisted, after the signs afforded by the teeth become uncertain. When three years old, their horns are smooth and handsome; after which period there appears a circle, or wrinkle, which is annually increased as long as the horn remains; so that, according to the number of these circles or rings, the age of a beast may be ascertained with tolerable precision, unless such wrinkles are defaced or artificially removed, by scraping or filing; a fraudulent practice, which is but too frequently adepted, in order to deceive the ignorant or inexperienced purchaser with respect to the real age of the animal. [*Complete Grazier.*

COKE DEVONS.

Winchester, Litchfield county, Conn. 14*th Sept.* 1825.

J. S. Skinner, Esq.

Sir.—You remarked in your valuable paper of the 8th of July, that you supposed we could give you some particulars, some weights and measures illustrative of the quality of the Devons; what they have yielded in milk, butter, cheese, beef, &c. and how they have compared in the yoke, at our cattle shows, with other breeds. When the fact is considered that Holkham is the first bull of the Coke Devon breed ever in Connecticut, and that his oldest calves are only 4 years old, no specimens of large fat oxen can yet be expected, nor of large quantities of milk or butter; but of the heifers we can say we have never known those of any breed give as rich milk, nor have we ever owned cows that gave as much milk at the same age, with the same advantages of feed. This is a general remark of all those who own the stock. The breed is so highly valued in Connecticut that few have been slaughtered. We, however, give you the account of three bulls, the only ones we know of the kind that have been killed, as contained in letters from Messrs. Cowles, Spencer and Lewis.

New Hartford, 2d August, 1825.

Messrs. S. Hurlbert & Co.

Gentlemen.—It will be difficult for me to give you an exact statement of the weight and feed of my bull, but have collected all the information from recollection, possible.

Weight of quarters and hide . . .	912 lbs.
Tallow, including leaf	100 lbs.
	1012 lbs.

Total 1012 lbs. which is the *exact weight.* He run with the cows through the summer until about the 1st of September. At that time was put to feed for the purpose of fattening, and had pumpkins given him occasionally until December, and then he was sent into the stable and fed with a half a bushel of cob meal per day, until the first of February, at which time he was slaughtered. His beef was very good.

I remain your friend and humble serv't,

HARRY COWLES.

N. B. The above bull was about 2 years and 9 months old, when killed.

—

East Hartford, August 30*th,* 1825.

Messrs. S. Hurlbert & Co.

Gentlemen—Yours of the 24th inst. came safely to hand, requesting me to give you the weight of the bull I purchased of Mr. Hudson, and the manner of feeding him. You doubtless saw him at the cattle show, and noticed the condition he was in at that time. I then sent him into the stable, and fed him on meal and potatoes (*principally potatoes,*) three months; then killed him.

Weight as follows—	Tallow, . . .	150 lbs.
	Hide and quarters, . .	1139
	Total, ...	1289

The stock from the bull, in general, is very fine. I have several of his calves, yearlings, that will weigh 400 lbs. if slaughtered.

Yours, respectfully,

JOSEPH SPENCER.

Note.—We sold the above bull to H. Hudson, Esq., of Hartford, when about seven months old. He was sired by Holkham, and out of a smallish native cow that weighed alive, at the time we sold the calf, 812 lbs. At the time we saw him at the cattle show he was not in high order, and when killed was three years and nine months old.

—

Farmington, 12th August, 1825.

Messrs. S. Hurlbert & Co.

Gentlemen—I received a line from you respecting the weight of my bull which was killed last March.

His quarters and hide weighed . .	1210 lbs.
Tallow, ...	124
Making in all, ...	1334

He was put into the stable in August, when he returned from[*] Northfield, and was fed with *coarse poor hay,* without any other feed, until some time in December, calculating to keep him another season. He being somewhat cross, I concluded to fat him. From that time till the 20th of March he was fed with meal and potatoes, and then killed.

I remain, yours,

ELIAS LEWIS.

N. B. Said bull was three years and two months old, when killed.

The superiority of the Devons does not consist in largeness of size, (as that is not desirable with the other qualities usually attached to it,) for in that respect they will about average with the native breeds of New England. Their properties for making beef are smallness of bone; a great inclination to fatten; the fine quality of their beef, and its unusual proportion in the most desirable parts; and their heavy weight compared to the size of their frame. Owing to the great demand for bulls of this stock with us, few have been altered for oxen. Six or seven pair only have been trained to the yoke, the oldest of which are four years old; three pair of which we improve. They appear to possess all of the requisite qualities desirable in the labouring ox, being remarkable for docility, activity, and to endure heat and fatigue. Their colour, a beautiful mahogany red, has always been a favourite one in the northern states for working oxen. *A pair of unspotted bright red* oxen would always, in consequence of their colour, sell from six to ten dollars higher than any other description of colour of equal size and shape.

We noticed a letter published by Mr. Powel, purporting to be from a Mr. E. Wolcott, of E. Windsor, Connecticut, which appeared in the American Farmer of the 15th July, wherein is stated, "I have seen the imported Devons, both in Connecticut and Maryland, and have never had but one opinion of them, which is, that they are inferior to our native stock." We are unacquainted with Mr. Wolcott, he never having, in his travels, called upon us to see our stock; but we have the candour to believe, had he resided in Litchfield county, *the district where the Devons are principally owned,* and had been better acquainted with them, his prejudices against the Devons would have changed into warm partialities in their favour. Perhaps he did not have the pleasure of attending the last cattle show at Hartford, where were exhibited from Farmington, a number of half-blood Devons, sired by Holkham, which were so much admired, and in competition with every other breed, short horns not excepted, took every premium. They were from five months to three years old. The same was the fact in regard to our last cattle show in Litchfield, the account of which, owing to an unfortunate circumstance, has not been published. Mr. W. speaks of the celebrated Bissell ox, slaughtered in Boston, in 1809, which he supposes "resembled the improved short horn breed." Is he not aware that, *that* ox had *long spread horns.* In order to show by the straws which way the wind blows, as the saying is, we will copy from the Connecticut Mirror, a paper published in Hartford, a paragraph published soon after the last cattle show in that city.

"*The Devonshire breed of cattle.*—Whoever went about the South Green, on the day of the show and fair of the Hartford county Agricultural Society, must have observed the *beauty, size* and *colour* of the cattle exhibited. The *best of them* were of the *Devonshire breed.* They not only obtained *all* the premiums, but drew the most attention from the by-standers. There were many other fine specimens of cattle, but we have been told that farmers almost *universally* preferred this breed.—*Ed. Con. Mirror.*"

Our object, when we commenced, was merely to give the weight of the three bulls, in doing which we thought best to introduce the letters from the three very respectable farmers who owned and killed them. From their feed and age, those experienced in matters of this kind, will be enabled to judge of their propensity to fatten. Hereafter we may furnish you with some more particulars, as to weight and measure, what they yield in milk, butter, cheese, &c. &c. We remain, respectfully,

Your most obedient,

SAM'L HURLBERT & CO.

ALDERNEY CATTLE.

John S. Skinner, Esq.

Dear Sir,—I find in the American Farmer of the 16th inst. a statement of the weight, and fatting propensity of an imported cow, given by Mr. Thompson, "a pretty general opinion having prevailed, that Alderney cattle are not quick feeders, nor of a size to be an object for graziers or victuallers."—That Mr. Creighton's cattle came from Alderney, has never been denied; but that they were what are called in Europe, "Alderney," or have been received in America, as such, has been contested from the date of their importation.

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[*] Culley's "Observations on Live Stock," 8vo. p. 211.

[†] Culley on Live Stock, p. 208, 209.

[*] Mr Lewis let said bull for the season to a gentleman in Northfield.

Mr Creighton, is a liberal gentleman, who had no knowledge of farm stock, and employed a Colonel of the Royal Invalids, and another officer, to select for him fine animals, to improve the breed of milch cattle in America.

At the Maryland Cattle Show, of 1822, it will be seen, that a young bull, bred upon one of the best managed estates in the country, was exhibited, as of this pure imported Alderney breed; that the premium was awarded to him; but that the judges say,

"For the best bull under two years of age, they award to General Ridgely, of Hampton, the premium of a piece of plate, of the value of $15, for his bull of seventeen months old, said to be a full blooded Alderney."

"They considered him a very well grown and fine animal, but from his form and points, they cannot but presume, there must have been some accidental cross in his breeding."*

J. MASON,
(*District of Columbia.*)
JOHN HARE POWEL,
(*Philadelphia County.*)
J. CHAUNCEY,†
(*U. S. Navy.*)
JOHN BARNEY, (*Delaware.*)
SAMUEL JACQUES, Jr.
(*Massachusetts.*)

Ample testimony was at hand to show, that this bull was of Mr. Creighton's pure blood. It has been believed, that this animal, and all his family were of Norman blood. It is evident that the committee did not consider him "from his form and points" of pure Alderney blood.

It is not intended to dispute with Mr. Thompson, any fact which he states. He requires no certificate to establish his assertions; it is but his opinions upon cows which any man who knows him would desire in a newspaper to confute. CURWEN.

Philadelphia County, Sept. 17, 1825.

ON FEEDING FARM STOCK.

Mr. Skinner, *Baltimore county, 1st Sept. 1825.*

Sir—In compliance with your reiterated requests, I now present you with an account of my feeding farm stock with *steamed food.*

A, is the cistern to hold water for supplying the boiler and wetting the food; from the bottom of which the pipe (*a*,) conveys the water into the boiler. The requisite quantity is regulated by a float, that rests on the water in the boiler, suspended by the rod (*c*,) from one end of the lever, (*d*,) fixed by a support (*f*,) on the upper edge of the cistern, and balanced at the other end by the weight (*h*,) suspended in the water of the cistern. Two other pipes, (*k k*,) proceed from the bottom of the cistern, and furnish water either for boiling or steaming, to the two troughs (*l l*,) into which the food is put. The furnace B, contains the boiler, from which the two pipes (*m m*,) convey the steam to the bottom of the troughs, to prepare the food. The cost of the apparatus, with its fixtures and furnace, was $225. I have used it three years, without accident or derangement in any part. What repair it may now need has been occasioned by the wear to which all machines are liable.

The food is prepared by chopping corn stalks, fodder, straw, or hay, with Eastman's cylindrical straw-cutter, the best implement I have seen. About five or six inches in depth of water is introduced into the troughs from the cistern, through the pipes *k k*—on that a layer of chopped forage is laid; then a layer of meal, and some water sprinkled on it from a watering-pot, and mixed afterwards in alternate layers, until the whole mess is put in. The steam is then turned in through the pipes *m m*, and the whole stirred. Sixty bushels can be cooked in an hour and a half, in each trough.

With food thus prepared, I supported, in good order, thirty-two head of stock, from the 10th of December until the 19th of April, inclusive—being one hundred and thirty days, at an expense of $124; as the following statement, taken from my account book, will show:

6 Farm Horses	6 Draught Oxen
2 Saddle do.	6 Milch Cows
2—a brood Mare and colt	1 Steer
6 Colts, above one year old	3 Yearlings.
—	—
16	16—Total 32.
—	—

60 bushels of mill stuff, at 15 cents, . .	$ 9 00
320 do. corn and cobb meal, at 20 cents . .	64 00
17 tons of corn husks, rye straw, timothy and clover hay, at $3 per ton, . .	51 00
For 32 head, for 132 days, less than three cents a day for each, ...	$ 124 00

Three measures of chopped forage for one of meal, is the proportion I adopted. The meal was measured in a stable bucket, which did not contain quite half a bushel; the forage was conveyed in bags to the steam-house, and their weight ascertained when filled. The whole amount of meal consumed, is ascertained from the mill account, and the amount of forage from the number of bags of known weight consumed daily.

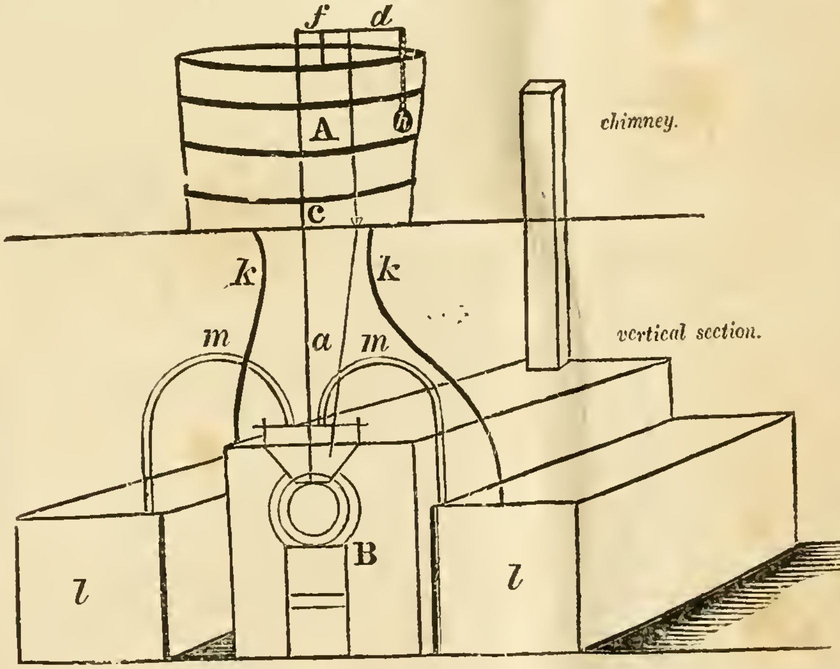
The daily allowance to the horned cattle was, ...	1	bushel of meal
	88	lbs. of corn husks, and after they were consumed, clover hay
For the horses, .	2	bushels of meal
	162	lbs. of a mixed cutting of volunteer, rye and timothy grass.

The horned cattle had more than they could eat; and the horses that were at hard work, required an additional quantity, which was given to them out of the 320 bushels of meal stated in the account above. The quantities are fixed, the prices may fluctuate—but the result of my experiment satisfies me, that to steam food, is to economize provender.

In justice to Messrs. Geddes & Stewart, of Baltimore, I state that my steaming apparatus was erected by them, and has entirely satisfied my expectations.

I remain,
With the assurance of my great esteem,
JOHN PATTERSON.

Apparatus for Steaming Food for Farm Stock.



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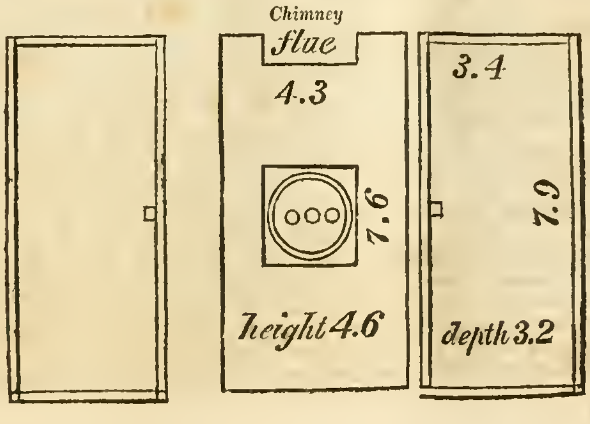

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*American Farmer, Vol. 4, p. 114.

†Mr. Thompson states, that Com. Chauncey had a calf from this cow. [See Editorial head.]

MARYLAND AGRICULTURAL SOCIETY.

It appears in No. 21. Vol. 7. page 167, that "A Friend of the Plough." has adopted an erroneous impression, which it may not be amiss to correct, particularly as remarks occasionally made in conversation, induce the belief that he is not the only one under that error. He speaks of the Maryland Agricultural *Societies*, on the Eastern and Western shores, as if they were two independent societies. It was once (see American Farmer, Vol. 5, p. 48,) thought by some persons "expedient to form the Maryland Agricultural Society, into two independent societies, one for the Eastern, and the other for the Western shore of this state." But a great majority disallowed the expediency; and in consequence the society continued as *one*, undivided. See the act of incorporation, Vol. 6, p. 241. S.

August 15th, 1825.

BOTANY.

ELM—ULMUS.

Natural order, Scabridæ, Amentaceæ, Juss. *A genus of the Pentandria Digynia class.*

> Fœcundæ frondibus ulmi.—Virgil.
>
> Fruitful in leaves the elm.

[We have always esteemed our native elm and the locust, as amongst the most useful for shade and timber, and the most beautiful for ornament, to be found in our forests.

The letter of our correspondent will answer an interesting purpose, if it should lead our readers in different parts of the Union to give accounts of the largest and most celebrated trees in their vicinity. Nothing can be more natural, or more congenial to virtuous emotions, than the veneration which is always felt for large, respectable old trees, that we have known in our youth. It grows out of the associations connected with them in our memory, and so strong is the principle, as to have often prompted men of refined feelings and poetic imagination, to address these venerable objects as though they were intellectual beings, possessing moral worth and agency in the relations of society. We recollect that under these influences, a beautiful ode was addressed by the late amiable and talented Doctor John Shaw, of Annapolis, to the old poplar on the college green, so well remembered and beloved by every one who had the fortune, in past times, to be educated at that once distinguished seminary of learning—St. John's College. In passing this old poplar a few weeks since, we could not but pause to reflect on the number of distinguished men who had, in a great measure, acquired under its friendly shade the principles of their character, and the foundations of their eminence in the various avocations and pursuits of their subsequent lives. We should suppose this old poplar to be considerably more than twenty feet in circumference at two feet from the ground, and should be glad to have its exact measurement.

We suppose that no loving observer of nature ever passed through the town of Pittsfield, in Massachusetts, who does not recollect its noble elm, its steepled church, and its neat, cleanly, white painted dwellings, with their porticoes ornamented with vines.

Phillips makes the following interesting remarks on the English elm:]

At the present time, when ages have so happily blended exotic and native beauties in our woods, the elm is never seen in those forests that keep their original character. It seems to have followed cultivation and enclosure, and is principally to be found in the neighbourhood where the town has been reared; or it marks the spot where the village once stood; and the rapid manner in which this tree propagates itself in hedgerows and on banks, by suckers from its far extending roots, will easily account for the quantity now found in such situations. It must have been a happy exchange for Britannia, when she banished the wolf from her shores, and received the elm into the bosom of her woods. Our neighbouring shores are not yet entirely free from these plunderers of the fold. It was formerly the custom in France for the hunters to suspend the skins of these animals on their church doors; but in later times, an elm was planted in their country church-yard, on which these trophies were hung; probably, with the idea that they would deter these ravenous animals from tearing the dead bodies out of their graves, which was no unfrequent occurrence, when hunger drove them from the mountains or the forests. Long after these kinds of offerings ceased to be made, the custom of planting elms in front of village churches was preserved; and it is this tree which still graces their cities and towns in their justly boasted *boulevards*, under the shade of which patient industry throws the thread, and places the pin so accurately on the cushion, warbling her native airs under this verdant roof, as happily as the wealthy dame, who, bedecked by the art of the humble lace-maker, can sing or sigh under the gayest dome of the proudest saloon.

English towns are strikingly deficient in these agreeable avenues, whose shade renders the summer promenade so agreeable, and gives such cheerfulness to the entrance of towns; for there can be no sight more pleasing to the traveller, than that of beholding the humble stalls of the little fruit merchants, intermixed and overlooked by the knitting grandmother or netting grandfather, with here and there a seat occupied by the wounded soldier; nor is the fume of the sailor's pipe so offensive in this situation, as at the checquered door of the narrow street

Spain owes her vistas, which are the pride of Aranjuez, Casel del Campo, Madrid, and other royal demesnes, to the union of its Philip with Mary of England; as before that period elms were not known in Spain, Philip II. having caused them to be taken from England, and planted in his native land. The elm is an aboriginal of Barbary, as well as the south and south-east parts of Europe. Linnæus says, it is rarely to be found above Helsing and Finland.

The elms of England are scarcely less remarked for their age, bulk, and beauty, than the British oaks, which form alike the world's just wonder, the guard of friends, and the scourge of foes, [except Americans.] Mr. John Ray, the botanist, mentions an elm which was felled in Sir Walter Bagot's park, in Staffordshire, that measured 120 feet in length, and was at the stool 17 feet in diameter. When sold, its head alone produced forty-eight wagon-loads of wood to burn, and its trunk, besides sixteen blocks, furnished eight thousand six hundred and sixty feet of plank; its whole mass was valued at ninety-seven tons.

This quality in the elm, which insures a constant shade during the summer months, has secured it a situation in most of the public, as well as the royal gardens of Europe. Henry IV. of France, planted an elm in the Luxembourg gardens of Paris, which stood until the late revolution in that country levelled both tree and monarch to the dust.

Queen Elizabeth, who was contemporary with *Henri Quatre*, it is said, planted an elm, with her own hands, at Chelsea, where she spent a part of her early days in a palace belonging to her father. This elm stood at the upper end of Church-lane, near the place where the turnpike now is, and was a boundary of the parish on the north side. It was felled, to the great regret of the neighbourhood, on the eleventh of November, 1745, and sold for a guinea, by the lord of the manor, who was no other than the worthy Sir Hans Sloane, which induces us to think that the tree must have become dangerous, or a nuisance to the road. It was 13 feet in circumference at bottom, and 6 feet 6 inches at the height of 44 feet. Before the hard frost of 1739-40, which injured its top, it measured 110 feet from the ground. It was in the year 1600 that Sir Francis Bacon planted Gray's-inn walks with elms, eight of which were standing in the middle of the last century.

Madame de Genlis speaks of an elm of great size in this country; in the hollow trunk of which, she says, a poor woman gave birth to an infant, and where she afterwards resided for a long time. This tree, which is a great curiosity, is still standing in the village of Crawley; but as the parish is not willing to be burthened with all the young elms that might have been brought forth from the trunk of this singular tree, the lord of the manor has very wisely put up a door to the entrance of this lying-in hospital, and which is kept locked, except upon particular occasions, when the neighbours meet to enjoy their pipe, and tell old tales in the cavity of this elm, that is capable of containing a party of more than a dozen. The interior of this tree is paved with bricks, and in other respects made comfortable for those that it embarks.

A few detached elms before clumps of pines or firs, add greatly to the beauty of the plantation, as the extreme softness of the colour of the elm leaves in the spring, and the delicate manner in which they seem sprinkled over the branches, have a delightful effect.

> "No numbers can the varying robe express,
> While each new day presents a different dress."

The autumn changes the full green foliage of the elm to a yellow or ochre colour, which enlivens the dark tints of the fir, scarce less agreeably than its juvenile shades. This tree varies exceedingly in the colour of its foliage, as well as in the size of its leaves, by the least change of soil. Thus we often see two neighbouring elms, whose roots have run into different strata, forming almost a different variety of this tree.

Of the American elms cultivated in this country, the Hortus Kewensis notices three varieties; the first of which was introduced or planted by Mr. James Gordon, in 1752, who also cultivated the hornbeam-leaved elm, in 1760, which is also a native of North America, as well as the drooping elm, which takes its name from the pendant position of its branches, and is also distinguished by its smooth oblong leaves.

Columella tells us, that the Romans fed their cattle with the leaves of the elm; for which purpose, Evelyn says, they are not to be despised; for being suffered to dry in the sun, on the branches, and the spray stripped off about the end of August, these he directs to be placed in a dry barn, and says, when hay and fodder is dear, they are of great service, and that the cattle will eat them in preference to oats, and thrive exceedingly well with them. But since the introduction of clover, and other exotic grasses and plants, so abundantly into our fields, the trees are but rarely robbed of their verdure to feed our cattle: yet we are surprised not to see the fallen leaves collected in the autumn, since every gardener knows that no manure is superior to decayed leaves.

We learn from the plays of M. Accius Plautus, that elm twigs were anciently used as instruments of castigation; for this comic poet speaks of a rogue who had been chastised so often, that he had wasted all the elms in the country, in rods and cudgels.

Elm timber is in great esteem for pipes that are constantly under ground; and it is incalculable what a quantity of these trees were swallowed by the numberless streets of our monstrous capital before iron pipes were placed in its stomach; and which, together with substituting that metal instead of elm for our last habitations, must be the means of making elm timber more plentiful for other purposes.

Captain Woodroofe's Journal informs us, that the greater part of the Persian vessels are built of elm timber, which abounds in the province of Peribazar.

Evelyn says in his Sylva, "Elm timber is of singular use; especially where it may lie continually dry, or wet, in extremes—therefore, proper for water-works, mills, the ladles and soles of the wheels, pipes, pumps, aqueducts, pales, ship-planks beneath the water-line, &c. A second-rate charcoal is made from this wood, and rails and gates of elm, thin sawed, are not so apt to rive as oak."

It has scarcely any superior for kirbs of coppers, feather edge, and weather boards; but it does not without difficulty admit the nail, without boring.—His grace the Duke of Devonshire, planted 54,143 young elms on his estates, between the years 1816 and 1819.

It was much more common formerly than at present, in the southern counties of England, for weather-boarding the sides of barns, stables, and even dwelling-houses for the farmers; but many of these were exchanged for buildings of brick and stone, during the long war, which dazzled all eyes with a deceptive prosperity, whilst it ate away the substance of the country, like a polypus in the flesh.

Medical writers have not been sparing of their commendations of the virtues of the elm, every part of which, from the root to the leaf, was esteemed a sovereign remedy for some complaint; but our space will not allow us to publish all the secrets of Theophrastus, Dioscorides, Galen, Pliny, Matthiolus, Bauhine, Ray, and a long list of other writers, who have recorded the cures performed by means of the elm. We fear that a greater number of their patients were boxed up in the planks of this tree, than were cured by its bark.

The elm leaves are often found with blisters upon them, occasioned by the pricking of insects, and include a viscous juice, called elm water, which we should not have mentioned as being good for recent wounds and bruises, but we find the fair sex of former days used it to wound mankind, as an old writer assures us that it was with this wash that they "brightened the skin of their faces, and made their countenances so amiable."

All the varieties of the elm may be raised from seeds, or propagated by layers or suckers taken from the roots of the old trees. We have lately seen elms of a considerable size transplanted, but they seldom make much new wood; and younger trees soon produce a better shade, and outrun the older plants, particularly if little trenches be dug near the roots to hold the rain water, that will greatly facilitate their growing in dry summers, and retain their verdure much longer. We observed this practice and its advantages in many new-formed boulevards and plantations of elms in the vicinity of Paris, where this tree is not less a favourite than in the environs of London.

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(Postponed by accident.)

J. S. Skinner, Esq.

New York, 14th June, 1825.

Sir,—The account published in the American Farmer, of 10th inst. of the "Noble Elm which adorns the Boston Mall;" is as far as it goes, very useful and interesting. It is indeed, a most noble tree; but, there are I make no doubt many other trees of the *same sort which are still larger*. However, in order to know this, to a certainty, it will be necessary to ascertain, what sort of an Elm this is; for there are four or five sorts of Elms; but I suppose it is a white Elm, (*Ulmus Americana.*) Then besides this, I think it should be stated, whether the tree be apparently sound, what sort of soil it grows upon, and I dare say some one competent to the task, would consent either to measure it, or, to give an estimate of how many cubic feet of timber there be in it; in this estimate the limbs which are 12 inches or more in diameter, should be reckoned as timber, the smaller branches should be called *cord wood*. If the measuring were done with accuracy, and the other matters clearly stated, gentlemen in different parts of the United States would be able to judge between this and any other *large tree* that they may chance to know off. Many gentlemen would doubtless send you the particulars of numerous *grand trees* of various sorts; such as the *white oak*, black oak, chestnut, black walnut, hickory, sweet gum, *locust*, red cedar, swamp cedar, live oak, button wood, white ash, julip tree, and other sorts. It would doubtless be very useful to the public to know what degree of expansion these several trees are capable of. It would be very useful to me to know this; and as I am endeavouring to gain information on this subject, if you think the result of my inquiries will be useful to your readers, I will cheerfully impart to you every particular relating to all *very grand trees* that I may become informed of. Michaux, in his North American Sylva, gives an account of a button wood, of an extraordinary size, thus: "In a journey in 1802, through the western states, I found on the right bank of the Ohio, 36 miles from Marietta, a button wood tree, whose base was swollen in an extraordinary manner; my travelling companion and myself measured it, and at four feet from the ground we found it to be 47 *feet* in circumference. This tree which still exhibited the appearance of vigorous vegetation, ramified at 20 feet from the ground. A button wood of equal size is mentioned as existing in Genesee." Michaux tells us of julip trees in Kentucky, which are 15 or 16 feet in circumference, and he mentions one which at five feet from the ground, measured 22 feet six inches in circumference; this tree grows near Louisville. I have heard of a much larger one than this in New Jersey; I shall go to see it soon, if I find it to be larger or even as large, I will send you the particulars of it. My informant says that it is ten feet *diameter*, and that its trunk is full thirty feet long, clear of limbs, and that its top is most magnificent. I have never seen a *mockernut hickory* larger than two feet through, but I have no doubt they grow much larger than that.

I am sir, most respectfully yours,

GEORGE WOODWARD.

LADIES' DEPARTMENT.

RUDIMENTS OF COOKERY.

FISH.

This department of the business of the kitchen requires considerable experience, and depends more upon practice than any other. *A very few moments*, more or less, will thoroughly spoil fish; which, to be eaten in perfection, must never be put on the table, till the soup is taken off.

So many circumstances operate on this occasion, it is almost impossible to write general rules.

There are decidedly different opinions, whether fish should be put into cold, tepid, or boiling water. We believe for some of the fame the Dutch cooks have acquired, they are a little indebted to their situation, affording them a plentiful supply of fresh fish for little more than the trouble of catching it; and that the superior excellence of fish in Holland, is because none are used, unless they are brought alive into the kitchen, (mackerel excepted, which die the moment they are taken out of the water.) The Dutch are as nice about this, as Seneca says the Romans were; who, complaining of the luxury of the times, says, "they are come to that daintiness, that they will not eat a fish, unless upon the same day that it is taken, that it may taste of the sea, as they express it."

On the Dutch flat coast, the fish are taken with nets; on our rocky coast they are mostly caught by bait and hook, which instantly kills them. Fish are brought alive by land, to the Dutch markets, in water-casks with air-holes in the top. Salmon, and other fish are thus preserved in rivers, in a well hole, in the fishing-boat.

Fish *of every kind* are best some time before they begin to spawn—and are unfit for food for some time after they have spawned.

The most *convenient utensil* to boil fish in, is a turbot-kettle; this should be 24 inches long, 22 wide and 9 deep. It is an excellent vessel to boil a ham in, &c.

The good folks of this metropolis are so often disappointed, by having fish which have been kept too long, that they are apt to run into the other extreme, and suppose that fish will not dress well, unless it is absolutely alive. This is true of lobsters, &c., and may be of fresh water fish, but certainly not of some sea fish.

Several respectable fishmongers and experienced cooks have assured the editor, that they are often in danger of losing their credit, by fish too fresh, and especially turbot and cod, which, like meat, require a certain time before they are in the best condition to be dressed: they recommend them to be put into cold water, salted in proportion of about a quarter of a pound of salt to a gallon of water. Sea water is best to boil sea-fish in, and let them boil slowly till done; the sign of which is, that the skin of the fish rises up, and the eyes turn white.

It is the business of the fishmonger to clean them, &c. but the careful cook will wash them again.

Garnish with slices of lemon, finely scraped horse-radish, fried oysters, smelts, or whitings.

The liver, roe, and chitterlings, should be placed so that the carver may observe them, and invite the guests to partake of them.

Fish, like meat, requires more cooking in cold than in warm weather—if it becomes frozen,* it must be thawed by the means we have directed for meat, in the 5th page of the 2d chapter of the Rudiments of Cookery.

LOBSTERS.

Buy these *alive;* the lobster-merchants some times keep them till they are starved, before they boil them; they are then watery, and have not half their flavour. Choose those, that (as an old cook says, are "*heavy and lively*," and) are full of motion, which is the index of their freshness.

Those of the middle size are the best. Never take them when the shell is *incrusted*, which is a sign they are old. The male lobster is preferred to eat, and the female, (on account of the eggs,) to make sauce of. The hen lobster is distinguished, by having a broader tail than the male, and less claws.

Set on a pot, with water salted in the proportion of a table-spoonful of salt to a quart of water;—when the water boils put it in, and keep it boiling briskly from half an hour to an hour, according to its size; wipe all the scum off it, and rub the shell with a very little butter or sweet oil; break off the great claws, crack them carefully in each joint, so that they may not be shattered, and yet come to pieces easily, cut the tail down the middle, and send up the body whole.

Sauce for Lobsters.—Bruise the yolks of two hard boiled eggs with the back of a wooden spoon, or rather pound them in a mortar, with a tea-spoonful of water; and the soft inside and the spawn of the lobster, rub them quite smooth, with a tea-spoonful of made mustard, two table-spoonsful of salad oil, and five of vinegar;† season it with a very little Cayenne pepper and some salt. To this elder or Tarragon vinegar, or anchovy essence, is occasionally added.

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*If the meat is frozen, the usual practice is to put it into cold water until it is thawed; then dry and roast it as usual: but we recommend you to bring it into the kitchen the night before, or early in the morning of the day you want to roast it, and the warm air will thaw it much better.

† [Reversed proportion of these would be better.]

Potted Lobster or Crab.—This must be made with fine hen lobsters when full of spawn, boil them thoroughly; when cold, pick out all the solid meat, and pound it in a mortar, it is usual to add, by degrees, (a very little) finely pounded mace, black or Cayenne pepper, salt, and, while pounding, a little butter. When the whole is well mixed, and beat to the consistence of paste, press it down hard in a preserving-pot, pour clarified butter over it, and cover it with a wetted bladder. [*Cooks' Oracle.*

MISCELLANEOUS.

DEPARTURE OF LA FAYETTE.

[Though our kindest wishes have constantly attended this veteran and consistent Apostle of Liberty, during his progress through all the states of the Union, and delighted as we have been to see him every where greeted with feelings of unmingled joy and gratitude; we have not felt at liberty to fill our pages with the details of his journey, nor has it been necessary, since, by the omnipresent influence of a *free* press, he who ran might read the least movement of the Nation's Guest. It was judged however, to be particularly proper to register in this Journal an account of his especial visit to the exhibition held by the Maryland Agricultural Society, and now that he has taken his departure, we shall be justified by our patrons in recording the valedictory ceremonies which solemnized the last embraces of the Chief Magistrate, and the Guest of the Nation.

It was but fit and proper that *these* ceremonies should be distinguished above all others. Every thing connected with them was calculated to raise the public expectation to its highest pitch, and all would have been disappointed if a scene so full of moral dignity, had not been in like manner characterized by an eloquence, wrought up, and full, as must have been the "heart out of which the mouth speaketh."

To act upon Mr. Adams, there were the considerations of what was expected, not merely from himself but from the station he filled—a consciousness that what he should utter, would be jealously criticised by foreign courts, and would go down to the latest American Posterity, as an index of that day's impressions, more monumental than marble or brass. All these considerations, quickened by personal knowledge and regard for the virtues of his guest, could not fail to inspire the President with a high sense of the sublime responsibility of his task, when called upon as the *delegate of the whole nation,* to bid that guest a reluctant and affectionate farewell.

Hitherto, Mr. Adams, has been regarded chiefly as an elegant scholar, a profound diplomatist, and a matchless controversial writer. The palm of eloquence has not been claimed for him. The occasion of his inauguration, was the only one on which we have heard him deliver any public oration. As we meddle not in politicks, we say nothing of the matter of his address; but manner and matter were observed minutely, and with that interest which every freeman must feel when he beholds the man to whom a free people have constitutionally confided their executive power, rising to proclaim to them and to the world, the principles that he means to illustrate and enforce in the exercise of his authority. What distinguished his *manner,* were the energy with which he ascended the rostrum; the confidence approaching to boldness with which he presented himself to a very large and enlightened and scrutinizing audience; and a clear enunciation of every sentence and every word; all evidently emanating from an unaffected consciousness of the integrity of his purposes. But were Mr. Adams to leave no other proof, his address to la Fayette, might be left to stand alone, like the occasion it served to adorn; giving proof that if he has not hitherto plucked the palm of oratory, it was not because it was beyond his reach, but that he has rather chosen to display the ripe fruits of learning, than the fragrant flowers of eloquence.

The answer of Gen. la Fayette, breathes throughout, a sense of gratitude, a love of true liberty, and a singular happiness in his topicks and expressions, which has never forsaken him in a career of the most extraordinary incidents and excitements that man ever went through; and through all of which he has evinced a knowledge of the structure and practical effects of our political institutions, which few foreigners, and especially Frenchmen, have ever attained, after the best opportunities of personal observation and experience.]

Address of the President of the United States to Gen. la Fayette, on taking leave of him at his departure on the 7th of September.

General la Fayette: It has been the good fortune of many of my distinguished fellow-citizens, during the course of the year now elapsed, upon your arrival at their respective places of abode, to greet you with the welcome of the nation. The less pleasing task now devolves upon me, of bidding you, in the name of the nation, adieu.

It were no longer seasonable, and would be superfluous, to recapitulate the remarkable incidents of your early life—incidents which associated your name, fortunes and reputation, in imperishable connexion with the independence and history of the North American Union.

The part which you performed at that important juncture was marked with characters so peculiar, that, realizing the fairest fable of antiquity, its parallel could scarcely be found in the *authentic* records of human history.

You deliberately and perseveringly preferred toil, danger, the endurance of every hardship, and the privation of every comfort, in defence of a holy cause, to inglorious ease, and the allurements of rank, affluence, and unrestrained youth, at the most splendid and fascinating court of Europe.

That this choice was not less wise than magnanimous, the sanction of half a century, and the gratulations of unnumbered voices, all unable to express the gratitude of the heart with which your visit to this hemisphere has been welcomed, afford ample demonstration.

When the contest of freedom, to which you had repaired as a voluntary champion, had closed, by the complete triumph of her cause in this country of your adoption, you returned to fulfil the duties of the philanthropist and patriot in the land of your nativity. There, in a consistent and undeviating career of forty years, you have maintained, through every vicissitude of alternate success and disappointment, the same glorious cause to which the first years of your active life had been devoted, the improvement of the moral and political condition of man.

Throughout that long succession of time, the people of the United States, for whom, and with whom you had fought the battles of liberty, have been living in the full possession of its fruits; one of the happiest among the family of nations. Spreading in population; enlarging in territory; acting and suffering according to the condition of their nature, and laying the foundations of the greatest, and, we humbly hope, the most beneficent power that ever regulated the concerns of man upon earth.

In that lapse of forty years, the generation of men with whom you co-operated in the conflict of arms, has nearly passed away. Of the general officers of the American army in that war, you alone survive. Of the sages who guided our councils, of the warriors who met the foe in the field or upon the wave, with the exception of a few, to whom unusual length of days has been allotted by Heaven, all now sleep with their fathers. A succeeding, and even a third generation, have arisen to take their places; and their children's children, while rising up to call them blessed, have been taught by them, as well as admonished by their own constant enjoyment of freedom, to include in every benison upon their fathers, the name of him who came from afar, with them and in their cause, to conquer or to fall.

The universal prevalence of these sentiments was signally manifested by a resolution of Congress, representing the whole people, and all the states of this union, requesting the President of the United States to communicate to you the assurances of grateful and affectionate attachment of this government and people, and desiring that a national ship might be employed, at your convenience, for your passage to the borders of our country.

The invitation was transmitted to you by my venerable predecessor: himself bound to you by the strongest ties of personal friendship, himself one of those whom the highest honours of his country had rewarded for blood early shed in her cause, and for a long life of devotion to her welfare. By him the services of a national ship were placed at your disposal. Your delicacy preferred a more private conveyance, and a full year has elapsed since you landed upon our shores. It were scarcely an exaggeration to say, that it has been, to the people of the Union, a year of uninterrupted festivity and enjoyment, inspired by your presence. You have traversed the twenty-four states of this great confederacy. You have been received with rapture by the survivors of your earliest companions in arms: You have been hailed as a long absent parent by their children, the men and women of the present age. And a rising generation, the hope of future time, in numbers surpassing the whole population of that day when you fought at the head and by the side of their forefathers, have vied with the scanty remnants of that hour of trial, in acclamations of joy at beholding the face of him whom they feel to be the common benefactor of all. You have heard the mingled voices of the past, the present, and the future age, joining in one universal chorus of delight at your approach; and the shouts of unbidden thousands, which greeted your landing on the soil of freedom, have followed every step of your way, and still resound, like the rushing of many waters, from every corner of our land.

You are now about to return to the country of your birth, of your ancestors, of your posterity. The executive government of the Union, stimulated by the same feeling which had prompted the Congress to the designation of a national ship for your accommodation in coming hither, has destined the first service of a frigate, recently launched at this metropolis, to the less welcome, but equally distinguished trust, of conveying you home. The name of the ship has added one more memorial to distant regions and to future ages, of a stream already memorable, at once in the story of your sufferings and of our independence.

The ship is now prepared for your reception, and equipped for sea. From the moment of her departure, the prayers of millions will ascend to Heaven that her passage may be prosperous, and your return to the bosom of your family as propitious to your happiness, as your visit to this scene of your youthful glory has been to that of the American people.

Go, then, our beloved friend—return to the land of brilliant genius, of generous sentiment, of heroic valour; to that beautiful France, the nursing mother of the twelfth Louis, and the fourth Henry; to the native soil of Bayard and Coligni, of Turenne and Catinat, of Fenelon and D'Aguesseau. In that illustrious catalogue of names which she claims as of her children, and with honest pride holds up to the admiration of other nations, the name of La Fayette has already for centuries been enrolled.—

And it shall henceforth burnish into brighter fame; for if, in after days, a Frenchman shall be called to indicate the character of his nation by that of one individual, during the age in which we live, the blood of lofty patriotism shall mantle in his cheek, the fire of conscious virtue shall sparkle in his eye, and he shall pronounce the name of LA FAYETTE. Yet we, too, and our children, in life and after death, shall claim you for our own. You are ours by that more than patriotic self-devotion with which you flew to the aid of our fathers at the crisis of their fate. Ours by that long series of years in which you have cherished us in your regard. Ours by that unshaken sentiment of gratitude for your services, which is a precious portion of our inheritance. Ours by that tie of love, stronger than death, which has linked your name, for the endless ages of time, with the name of Washington.

At the painful moment of parting from you, we take comfort in the thought, that wherever you may be, to the last pulsation of your heart, our country will be ever present to your affections; and a cheerful consolation assures us, that we are not called to sorrow most of all, that we shall see your face no more. We shall indulge the pleasing anticipation of beholding our friend again. In the mean time, speaking in the name of the whole people of the United States, and at a loss only for language to give utterance to that feeling of attachment with which the heart of the nation beats, as the heart of one man—I bid you a reluctant and affectionate farewell.

To which Gen. la Fayette made the following answer:

Copy of Gen. la Fayette's answer to the President of the United States, on the 7th of Sept., 1825.

Amidst all my obligations to the general government, and particularly to you, sir, its respected chief magistrate, I have most thankfully to acknowledge the opportunity given me, at this solemn and painful moment, to present the people of the United States with a parting tribute of profound, inexpressible gratitude.

To have been, in the infant and critical days of these states, adopted by them as a favourite son; to have participated in the toils and perils of our unspotted struggle for independence, freedom and equal rights, and in the foundation of the American era of a new social order, which has already pervaded this, and must, for the dignity and happiness of mankind, successively pervade every part of the other hemisphere; to have received at every stage of the revolution, and during forty years after that period, from the people of the United States, and their representatives at home and abroad, continual marks of their confidence and kindness, has been the pride, the encouragement, the support of a long and eventful life.

But how could I find words to acknowledge that series of welcomes, those unbounded and universal displays of public affection, which have marked each step, each hour, of a twelve-month's progress through the twenty-four states, and which, while they overwhelm my heart with grateful delight, have most satisfactorily evinced the concurrence of the people in the kind testimonies, in the immense favours bestowed on me by the several branches of their representatives, in every part, and at the central seat of the confederacy.

Yet, gratifications still higher awaited me; in the wonders of creation and improvement that have met my enchanted eye, in the unparalleled and self-felt happiness of the people; in their rapid prosperity and insured security, public and private; in a practice of good order, the appendage of true freedom, and a national good sense, the final arbiter of all difficulties, I have had proudly to recognize a result of the republican principles for which we have fought, and a glorious demonstration to the most timid and prejudiced minds, of the superiority, over degrading aristocracy or despotism, of popular institutions founded on the plain rights of man, and where the local rights of every section are preserved under a constitutional bond of union. The cherishing of that union between the states, as it has been the farewell entreaty of our great paternal Washington, and will ever have the dying prayer of every American patriot, so it has become the sacred pledge of the emancipation of the world, an object in which I am happy to observe that the American people, while they give the animating example of successful free institutions, in return for an evil entailed upon them by Europe, and of which a liberal and enlightened sense is every where more and more generally felt, show themselves every day more anxiously interested.

And now, sir, how can I do justice to my deep and lively feelings for the assurances, most peculiarly valued, of your esteem and friendship, for your so very kind references to old times; to my beloved associates; to the vicissitudes of my life; for your affecting picture of the blessings poured by the several generations of the American people on the remaining days of a delighted veteran; for your affectionate remarks on this sad hour of separation; on the country of my birth, full, I can say, of American sympathies; on the hope, so necessary to me, of my seeing again the country that has deigned, near half a century ago, to call me hers? I shall content myself, refraining from superfluous repetitions, at once, before you, sir, and this respected circle, to proclaim my cordial confirmation of every one of the sentiments which I have had daily opportunities publicly to utter, from the time when your venerable predecessor, my old brother in arms and friend, transmitted to me the honourable invitation of Congress, to this day, when you, my dear sir, whose friendly connexion with me dates from your earliest youth, are going to consign me to the protection, across the Atlantic, of the heroic national flag, on board the splendid ship, the name of which has been not the least flattering and kind among the numberless favours conferred upon me.

God bless you, sir, and all who surround us. God bless the American people, each of their states, and the federal government. Accept this patriotic farewell of an overflowing heart; such will be its last throb when it ceases to beat.

OLD HORSE.

To the Editor of the Annals of Sporting.

Lydiate Cottage, July 8th, 1822.

On Tuesday, the 11th of June, in company with Mr. Charles Town, the printer, and Mr. Lucas, veterinary surgeon, both of Liverpool, I visited Latchford-lock, about a mile distant from Warrington, for the sole purpose of seeing a horse which has actually attained the surprising age of 63 years, being now in his 64th. The horse belongs to the Mersey and Irwell Navigation Company; and, from the politeness of one of the proprietors, W Earl, esq. I had an opportunity, not only of examining this extraordinary animal, but of learning the following particulars relative to him:—He was bred by Mr. Edward Robinson, of Willgrave farm, in Woolston, a short distance from Warrington. When young, and, indeed, till he reached the age of 50, he manifested an extremely vicious disposition, not only to human beings, but to dogs or any other animals that happened to oppose his progress, or stand in his way; and this was particularly shown when, at the dinner hour or other periods, a cessation from labour took place; he was impatient to get into the stable on such occasions, and would use, very savagely, either his heels or teeth, (but particularly the latter,) to remove any living impediment, whether pig, dog, or child, that happened, by chance, or otherwise, to be placed in his way. His teeth in front are perfect, but very long; while his bridle-teeth or tusks, after having grown to an unusual length, became half inverted, and now describe an uncouth semicircle, convexing towards the upper jaw. His lower lip is neither so loose, nor so pendulous, as what it is generally seen in very old horses. His eye is very remarkable; it seems differently placed in the socket from those of all other horses which I have observed; and it is, at the same time, so bright and clear, and presents altogether so perfect an appearance, as to afford a strong presumption that his sight is as good as that which is usually found in horses at the age of 12 or 14. Thirty years of his life, it seems, were spent in a gin, and the remainder principally on the Mersey and Irwell navigation, in towing boats.—When in full flesh and the vigour of life, he would scarcely have measured, I should suppose, 15 hands. His colour is what may be called a chestnut dun, which was dappled in earlier life, with cropped ears and one hind foot white. He grazes in summer on the luxuriant pasturage of the meadows, near Warrington, on the banks of the Mersey, and in winter is taken into the stable, and fed on mashes and soft food. He still possesses the use of all his limbs in tolerable perfection, lies down and rises with ease; and, when in the meadows, will frequently play, and even gallop, with some young colts, which graze along with him. This extraordinary animal is healthy, and manifests no symptoms whatever of approaching dissolution.

It is generally supposed that no other horse ever attained the age of 64. In the year 1745, when the rebels retreated, they left a strong grey horse in Manchester, which was afterwards employed in that town, chiefly, I believe, in drawing a milk-cart, for nearly 40 years. The age of this horse was not exactly known; but it was evident he was considerably more than 40 when he died; and, on the score of longevity, may, perhaps, be ranked next to the animal I have just described.

I am, sir,
Yours, respectfully,
W. JOHNSON.

GOOD RULES.

[From the rules and regulations for the government of publick schools, we extract the following, as advantageously applicable to all schools, and as conveying useful hints to parents and guardians.]

3rd. Parents or guardians shall not at any time, or on any occasion, interfere with the government of the schools.

4th. They shall not detain the children at home on any frivolous employment, but shall be particular in sending them to school at the stated hour, with clean face and hands, hair combed, and as decently apparelled as their circumstances will permit.

5th. It is recommended, that parents and guardians co-operate with the teachers by strict attention to the morals and behaviour of the children while at home, to keep them at all times from associating with idle, noisy, or wicked company in the streets, or otherwise; and especially to exert their authority to prevent the pernicious habits of swearing, lying, and other vices and immoralities; and endeavour to set before them examples of sobriety and good conduct; to inculcate obedience to their teachers, and a due respect to their superiors in age, frequently to read to them in the Holy Scriptures; to go with or send them to some place of public worship on the Sabbath day; and generally by their demeanour and manners, endeavour to train them in virtuous habits, that may enable them to perform the various duties of life, with honour to themselves, and benefit to society.

By order and on behalf of the controllers of the public schools.

ROBERTS VAUX, *Pres't.*

SPORTING OLIO.

CENTREVILLE RACES.

On the 4th of October, Governor Wright's elegant CUP of fifteen ounces, holding three pints, will be run for by SILVER HEELS' COLTS, two miles and repeat.

On the 5th of October, a sweepstakes purse of the gate-money, fifty dollars entrance to be added to the purse, three miles and repeat, agreeable to the Baltimore Association Club.

On the 6th of October, a sweepstakes purse of the gate-money, thirty dollars entrance to be added to the purse, free for all the horses, two miles and repeat, agreeable to the rules of the Baltimore Association Club. Purses given by

JOHN BEARD.

FOR THE AMERICAN FARMER.

Sporting intelligence.—On the 6th inst., at Blakeford, Gustavus A. T. Wright, grandson of Governor Wright, not sixteen years of age, killed twelve single bats on the wing, at fourteen shots.

Test, WM. PANNETT.

RECIPES.

PREVENTION OF YELLOW FEVER.

As soon as strangers get into the warmer latitudes, if they be plethoric, they should lose some blood, and take once or twice a week, for a fortnight, a little cooling physic, such as salts and manna, or a little sea-water. Their diet should be sparing, and they should refrain from salt meat as much as possible. Their drink should be rum and water, made *weak*, which may be acidulated either with the vegetable or mineral acids; and wine may be allowed in moderation. They should keep as much upon deck, to enjoy the pure air, as the weather will admit of

When they arrive on shore, they must be very careful of not indulging too much either in eating or drinking; and particularly in not exposing themselves to the heat of the sun, or the night air; as an error in these things is often of the most fatal consequence. Their food should be such as is easy of digestion, and should consist chiefly of vegetables and sub-acid fruits. For drink, rum and water, or wine and water. And, above all, let the body be kept gently open, once in six or seven days, for eight or ten weeks, till the constitution be somewhat inured to the heat of those burning climes.

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER 23, 1825.

The Editor is impelled, by a sense of duty, to proclaim his gratitude for the very flattering increase of patronage to this journal, since the commencement of the present volume. But it is not of the number of his subscribers that he does, or can boast, but of their character and intelligence, indicated by the value of their communications, and their known standing in their respective states. We *do* feel a pride in having the management of a work devoted to objects of great publick utility, and which, considering the whole number of its patrons, is subscribed for. and *read*, by as great a proportion of men of distinguished worth and talents, as any other journal printed in this country. But, after more than six years of pleasurable toil, we have little left but the consciousness of having been the willing agent in advancing the cause of American agriculture. Our expenses, more than $3,000 per annum to worthy mechanicks of different trades, are *certain;* and we have need of the greatest punctuality, as well as of *greater circulation.* We must, therefore, of each subscriber, beg the favour of sending us, if he can, a single additional name, if no more. Each one is at liberty, and we will thank him to consider himself, our agent; and, if desired, we will send him a subscription paper—though all that is necessary, is to enclose $5 by the mail, at the risk of the Editor; and whether the money be received or not, the numbers which have been published of the seventh volume, and those to be published, with the title page and index, will be forwarded in good condition.

Any person getting six subscribers to the American Farmer, will be entitled to a seventh copy gratis.

☞A few complete setts of the American Farmer may be had, and a commission of $5 will be allowed to any person who will find a purchaser for a complete sett.

☞Memoirs of the Pennsylvania Agricultural Society for sale by John S. Skinner—320 pages elegantly printed, with many beautiful engravings, for $1 per volume, or six volumes for $5.

☞The Trustees of the Maryland Agricultural Society, held an extra meeting on Thursday week last, at Brookland Wood, the seat of R. Caton, Esq., and adjourned to meet on Thursday, the 13th of October, at Long Green, the residence of James Gittings, Esq.

☞General la Fayette took with him all the preceding volumes of the American Farmer. Let our good friends, the many respectable writers who enlighten its pages, bear in mind that they will all be regularly laid on his table at La Grange.

The statement that Com. Chauncey had a heifer calf from Mr. Thompson's cow, was made by the Editor, of whom the calf was purchased by Com. C. The brackets, [ ] used to denote editorial matter, were inadvertently omitted.

☞It is hoped by the Editor, that it is already understood by his subscribers, that the Farmer is always open for propounding their queries upon any particular subject on which they may desire to elicit information. As the inquirer can best explain what he desires to know, the queries may be best framed by himself; and it has been already abundantly shown, by the readiness with which most queries are answered, that the enjoyment of the privilege of asking, is usually accompanied with a sense of obligation, and a disposition to answer such as may be put by others.

TOBACCO.—Amount of inspections in the state warehouses during the last week—520 hhds.

CONTENTS OF THIS NUMBER.

General Observations on buying and Stocking a Farm with Cattle—Coke Devons in Connecticutt, weight when slaughtered—Curwen, on Mr. Thompson's "Alderney" Cattle—Mr. Patterson's description of his Apparatus for Steaming Food for Stock—Maryland Agricultural Society—The Elm, size and beauty of—Rudiments of Cookery, Fish, To prepare Lobsters—Departure of la Fayette for Europe, Address of the President of the United States on taking leave, and the Answer of the General—Old Horse—Good Rules for Schools—Centreville Races, Good Shooting—Prevention of Yellow Fever—Editorial—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9 50	10		
BACON, and Hams, . .	lb.	7	10	11	
COFFEE, W.I. Green, .	—	18	19	20	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	20	23		
Georgia Upland, . . .	—	16	13		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	7	10	12	15
FEATHERS, Live, . . .	—	33	35		
FISH, Herrings, Sus.	bbl.	2 62	2 75	3 00	
Shad, trimmed,	—	6			
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	4 75	5 25		
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	4 50	4 75		
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	53	56		
Wheat, Family Flour,	—	1 00	1 10		
do. Lawler, ...	—	92	98		
do. Red, ...	—	90	95		
Buckwheat, ...	—	55	75		
Rye, ...	—	50			
Barley, ...	—	50			
Clover Seed, Red . .	—	5 00	5 50	6 00	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	25		25	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1 50			
HEMP, Russia, clean, .	ton	165	180		
HOGS' LARD, ...	lb.	10	11		
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	23	25		
MOLASSES, W. India,	gal.	34	37		50
MEAL, Corn, kiln dried,	bbl.	2 37			
NAILS, 6a20d.	lb.	6½	7	8	9
NAVAL STORES, Tar,	bbl.	2 50			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2			
OIL, Whale, common, .	gal.	27	30		
Linseed, ...	—	75			
PORK, Baltimore Mess,	bbl	14 50	15		
do. Prime, . . .	—	11			
PLASTER, cargo price,	ton.	5 50			
POTATOES, ...	bush	75	1 00		
RICE, fresh, ...	c.lb.	3 25	3 50		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	27			
PEACH BRANDY, 4th pr	—	80	1 00		
APPLE BRANDY, 1st pr	—	34	35		
SUGARS, Havana White,	c.lb.	13 00	14 00		
do. Brown, . .	—	11 00	12 50		
Louisiana, ...	—	9 50	11 00		
Loaf, ...	lb.	19	22		
Lump, ...	—	18			
SPICES, Cloves, ...	—	80	90		
Ginger, Ground, . . .	—	7	8		
Nutmegs, ...	—	1 75			
Pepper, ...	—	17	18	25	
SALT, St. Ubes, ...	bush	40	42		
Ground Alum, ...	—	50			
SHOT, all sizes, ...	cwt.	9 50		10 00	
WINES, Madeira, L. P.	gal.	2 00	2 50	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	3	8		
Port, first quality, . .	gal.	2 00		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOY, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

DISEASES INCIDENT TO CATTLE IN GENERAL.

(Continued from p. 202, American Farmer.)

7. The *Foot-rot* is another disease peculiar to the feet of sheep, and if it be not quickly eradicated, generally proves contagious. It arises, in general, from sheep feeding on long, rank grass, in wet seasons; but inattention to cleanliness will also produce the foot-rot as well as the foot-halt.

This disease is known by lameness, which increases as the foot-rot becomes more inveterate, by the oozing of a disagreeably fetid matter from between the claws, and by the appearance of proud flesh in the more advanced state of the malady; at length, if it be not timely discovered, the foot becomes so completely mortified by the cancerous humour corroding every part of it, as to become incurable; in which case, the skin is the only valuable part of the animal. It is remarkable throughout the progress of this disease, that sheep retain their appetite, and apparently feed as well as when in perfect health; though they very soon fall away and continue declining till they have lost all their fat. Their appetite, however, remains till the very last stage; and instances have occurred in which they have been so eager as even to crawl on their knees for food.

Various remedies have been tried and recommended for the cure of this contagious disorder, of which the following appear most deserving of notice. As soon as the disease is discovered, the sheep should be separated from the rest of the flock, and the part affected pared and cleansed, so as not to touch the quick, and at the same time to remove the gravel, if any should be there contained; after which either of the remedies subjoined may be applied. 1. Mix four ounces of the best honey, two ounces of pulverized burnt alum, and half a pound of powdered Armenian bole, in such a quantity of train or other fish oil, as will make the various ingredients of the consistence of salve. The honey should be first dissolved gradually, and the bole carefully stirred in, and then the alum and oil are to be added. Or, 2. Reduce three ounces of verdigris, four ounces of alum, a similar quantity of vitriol, one ounce and a half of white mercury, and one ounce of white copperas, respectively, into fine powder, and gradually dissolve the whole into one quart of white-wine vinegar. It may be proper to observe, that the former remedy was invented by Mr. George Culley, an eminent grazier, of Fenton, in the county of Northumberland; and the latter by the late eminent Mr. Bakewell. In Mr. Young's opinion, (Annals of Agriculture, vol. xxi.) the salve is more efficacious than the liquid, having in one or two cases effected a cure where the latter had failed; but Mr. Y. states, that he uniformly employs Mr. Bakewell's remedy before the animals are anointed with Mr. Culley's salve.—Or, 3. Two ounces of roche-alum, a similar quantity of blue vitriol, one ounce of verdigris, and a quarter of an ounce of animated quicksilver, may be dissolved in a quart of good distilled vinegar; and this liquid may be dropped on the diseased part, care being taken to keep the feet dry, and clean from all dirt or filth.—Or, 4. When a sheep is first observed to be affected by it, let it be brought in, and the sore foot well washed with soap and urine; then well bathed with turpentine, and afterwards rubbed all over with tar and bound up with flannel: and if the sheep be then turned into a clean dry pasture, the cure is certain.[*]

In some observations on the nature and cure of this malady, communicated to the Board of Agriculture by R. Worthington, Esq., of Southend, the fact of its being contagious is clearly established; and the following method of treatment is stated to be that which has proved most successful. It consists, first, in perfectly cleansing the feet with soap and water; then, in scraping with a knife, and occasionally cutting off the foul and putrid portion of the foot, whether of the interior softer parts, or of the hoof. After this, the bloody surfaces are to be scoured with a mixture consisting of equal parts of muriate of antimony, tincture of benzoin, and tincture of myrrh; and a little muriate of antimony alone is directed to be applied with a hair pencil to the more ragged and diseased parts. To the practice of muffling the feet, in order to keep them dry, Mr. W. objects most decidedly; because, if the land be wet when the sheep are turned out, the feet will suffer more from absorbed damp, than if they were not covered at all. He considers it preferable to give them food and lodging under an appropriate shed, or in some convenient out-house; and, at all events, directs that they should be kept on some dry treading, for an hour or two, after every dressing. The practice here described, Mr. W. asserts, will always put a stop to the progress of the foot-rot.[*] The following mode of treating this troublesome malady, was communicated to the Society of Arts, by Mr. Richard Parkinson, of Walworth, who was honoured with their silver medal for it. In sheep thus affected, he directs the hoofs to be pared, leaving no hollow to hold dirt: if matter be formed, it must be carefully discharged, after which the feet must be washed clean from dirt with stale urine, and wiped with a sponge. The sheep are next to be put into a house or shed, the floor of which has been previously spread, about two inches thick, with quick-lime reduced to powder by a small quantity of water. The fresher the lime is, the better. Upon this, the sheep are to stand for six or seven hours, and the cure will be effected.[†]

8. *Gall,* or *Scower.* This disease prevails chiefly during the winter, and is supposed to be produced by severe frosts. An immediate change to dry food is the best remedy that can be resorted to; and it appears from the practice of Mr. Ellman, that if some hay be given to sheep on those mornings when hoar frosts are upon the ground, it prevents them from being attacked by the gall.

9. The *Hunger rot,* is generally occasioned by poor living, especially from a scanty supply of winter fodder. It may easily be known by the leanness of the sheep. An immediate change of keep is the proper cure.

10. *Pelt-rot.* In this disorder, the wool or hair falls off spontaneously from the sheep. Scanty keep, exposure to much wet, or sometimes a sudden change from poor to full feeding, will variously produce the pelt-rot, which is likewise occasioned by the *scab.* In the last case, the removal of that disease will of course effect a cure; but in the former instances, as soon as a sheep is discovered to be affected, (if not too far gone,) it should be separated from the flock, and driven into a detached yard, where the diseased part should be cleansed, and the animal anointed with a mixture of turpentine, lard, or other grease, and tar, in such proportion as to form a salve (a piece of cloth being sewed on the animal to keep it from the cold,) and where they should be supplied with the best food, an attentive regard to the regular distribution of which, especially in winter, would effectually prevent this malady.

11. *Red-water.* This malady is sometimes called the *resp,* and is believed to originate from sheep feeding too freely on turnips, clover, or other rich and succulent vegetables. Frequent driving about, and the use of common salt, are said to be successful remedies in the red-water, which, it is asserted, may be *prevented* by giving the animals dry provender, in the course of the night, after they have been feeding on the vegetables above mentioned. The use of parsley in this malady is likewise said to be beneficial.

"This disease[*] commonly makes its appearance about the beginning or end of winter, and first affects about the breast and belly, although at times it spreads itself over other parts of the body. It consists in an inflammation of the skin, that raises it into blisters, which contain a thin, reddish, and watery fluid. These continue for a short time, break, and discharge their matter, and are followed by a blackish scab.

"When the sheep are exposed to cold or wetness, the skin being fretted, makes the blisters rise; or, they often arise from cold affecting the animal internally; thus producing a slight fever, which throws out these vesicles on the body, similar to the scabby eruptions which appear about the face, and more particularly about the mouth of persons affecte with cold. The blood in this disease is but little affected, although a little of it oozes into the vesicles on the skin, and communicates to them that reddish tinge, which gives origin to the name.

"Red-water is a disease that but seldom appears in this country, and is almost never fatal. In cases where the disease is violent, a little blood should be taken. The sheep should be placed in a fold by itself, the blisters slit up, and a little infusion of tobacco put into them, and the following medicine may be given for three or four mornings successively: Take of sulphur two ounces, honey, treacle or syrup, three ounces; mix them and divide them into six doses, of which one may be given every morning, in half a mutchkin of warm water. If this is found unsuccessful, half an ounce of nitre, mixed with the foregoing recipe, will be attended with good effects; after which a dose of salts may be given, and the body washed with lime-water upon the parts affected."

12. The *Rickets* occur chiefly in the county of Huntingdon, where they are supposed to have been introduced from Holland. Few diseases are more fatal than the rickets, the causes of which have never been precisely ascertained, so that no remedy applied for its removal has hitherto been attended with success.

The symptoms indicating the existence of this malady, are, first, a species of giddiness, which renders the sheep uncommonly wild and fierce; starting up suddenly, and running, on the approach of any person, to a considerable distance, as if it were chased by dogs. In the second stage, a violent inflammatory itching in the skin takes place; the sheep rubs itself violently against trees, hedges, &c. so as to pluck off the wool, and even to lacerate the flesh; no cutaneous eruption ensues, nor does any discharge of matter follow, and every thing indicates a most violent fever. In the last period of the rickets, the progress towards dissolution is very rapid, and the sheep, after reeling about, lying down, and occasionally taking a little food, at length expires.

This disorder is chiefly prevalent in the spring, and is hereditary; so that, after remaining concealed for one or two generations, it re-appears with increased violence. The rickets also appear *suddenly,* in consequence of which circumstance no precaution of the most judicious grazier can detect the malady; hence there is no other alternative, but to ase breeding from such stock. We trust the at-n tion of graziers and breeders will be more particularly directed to this formidable malady.

13. The *Rot.* Few disorders have been more

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[*] Hogg's "Shepherd's Guide," p. 170.

[*] Communication to the Board of Agriculture, vol. vii. part i.

[†] Transactions of the Society of Arts, &c. vol. xxi., pp. 126, 127.

[*] Hogg's "Shepherd's Guide," p. 186, &c.

fatal to sheep, or have more frequently exercised the attention of graziers and breeders than the *rot;* for the origin of which various causes have been assigned. Thus ("Letters and Papers of the Bath and West of England Society," vol. i.) it is attributed to fluke-worms, that breed in the livers of sheep, whither they are conjectured to be conveyed through the nostrils while the animals are grazing; but these worms are evidently rather the *effect* than the cause of *rot.* The late Dr. Darwin suspected it to proceed from the inactivity of the absorbent vessels of the livers of sheep: so that their bile becomes too thin, particularly in wet or moist seasons. Dr. Harrison, in a recent interesting tract on the rot, is of opinion, that it originates from *paludal effluvia*, or those unwholesome exhalations that arise from marshes; but, to this suggestion, salt marshes form a striking exception. And it is a fact, that in the county of Lincoln, in rotting seasons, the sheep fed on salt marshes, which are overflowed by the spring tides, sell at very high prices, from the confidence that they are safe. From an attentive consideration of every circumstance, it is evident, that superabundant moisture, either of food, (experience has proved that even one half hour's feeding on moist or marshy lands, in hot weather, will produce it,) atmosphere, or situation, is the real cause of this dropsical malady; though it is certain, that the dry limed land in Derbyshire will produce the rot, as well as meadows that retain water and stagnant marshes; so, in driving sheep to any distance, if they be suffered to lie only one night on a wet spot of ground, whether in an elevated situation or not, they are very liable to the rot.

The symptoms indicative of this fatal disease are thus accurately stated by Dr. Harrison, from whose very able "Inquiry into the Rot in Sheep and other Animals," (8vo., 1804,) we have selected them: "When, in warm, sultry, and rainy weather, sheep, that are grazing on low and moist lands feed rapidly, and some of them die suddenly, there is reason to fear that they have contracted the rot. This suspicion will be further increased, if a few weeks afterwards the sheep begin to shrink, and become flaccid in their loins. By pressure about the hips at this time a crackling is sometimes perceptible. Now, or soon afterwards, the countenance looks pale, and upon parting the fleece, the skin is found to have exchanged its vermilion tint for a pale red; and the wool is easily separated from the pelt. As the disorder advances, the skin becomes dappled with yellow or black spots. About this time the eyes lose their lustre, and become white and pearly, from the red vessels of the *tunica adnata* and eyelids being contracted, or entirely obliterated. To this succeeds debility and emaciation, which increase continually till the sheep die; or else ascites, and perhaps general dropsy, supervene, before the fatal termination. These symptoms are rendered more severe by an obstinate purging, which comes on at an uncertain period of the disorder. In the progress of the complaint, sheep become what the graziers call chockered, i. e., affected with a swelling under the chin, which proceeds from a fluid contained in the cellular membrane under the throat.

"In five or six days after contracting the rot, the thin edge of the small lobe of the liver becomes of a transparent white, or bluish colour, and this spreads along the upper and lower sides, according to the severity of the complaint. Sometimes it does not extend more than an inch from the margin. In severe cases, the whole peritoneum investing the liver is diseased; and then it commonly assumes an opaque colour, interspersed with dark red lines or patches. The upper part of the liver is sometimes speckled like the body of a toad, to which it is said to bear a striking resemblance; round the *ductus communis choledochus* and hepatic vessels, a jelly-like matter is deposited, which varies according to the severity of the attack, from a table spoonful, or less, to five or six times that quantity. Upon boiling, the liver loses its firmness, and separates into small pieces in the water, or remains soft and flaccid.

"Several graziers and butchers, with whom I have conversed at different times, having observed that sheep are much disposed to feed during the first three or four weeks after being tainted, omit no opportunity of producing it, to increase their profits. When the first stage is over, flukes begin to appear in the *pori biliarii*, the *ductus communis choledochus*, and in the gall-bladder. At first, the quantity of these creatures is small; but as the disease advances, they increase, and before death are often very numerous. In the last part of the complaint, they are sometimes to be found in the stomach, as well as in the intestines and liver.—This, like the visceral disorders of the human body, may terminate in resolution, effusion, suppuration, or schirrus.

1st. "The complaint is said to terminate in resolution, when the inflammatory action goes off, without destroying the state and texture of the parts.—However, I am strongly inclined to believe, that every considerable inflammation in the human body, and in other animals, although it ends in resolution, leaves behind it some remains, which may be discovered by an experienced anatomist. When the vessels are thrown into inflammatory action for a few days only, effusion commonly takes place, and the coats become thicker, and assume a buffy colour. These changes in the sanguinary system often continue through life, and lay the foundation of many chronic and incurable disorders. Sheep that recover from the rot exhibit very different appearances after death, according to the severity of the attack; but the taint is seldom or never entirely removed. I was desired, within these few days, to look at the liver of an old ewe, that died fat, and contained fourteen pounds of suet in her body.—The back part of the small lobe was dappled with whitish spots; the coats of the *ductus communis* and and *pori biliarii* were considerably thickened, and more solid than usual. In colour, they resembled the human *aorta* in old people, and were full of flukes; in other respects the liver appeared to be sound and natural. The butcher asserted, that the variegated appearance and alteration in the ducts, were occasioned by a slight taint of long standing, which had not been considerable enough to disorder the economy, or impair the health of the animal sufficiently to prevent its feeding.

2dly. "When sheep die suddenly, in the first stage of the disorder, an effusion of serum, or of wheyish-coloured fluid, may be commonly discovered in the cavity of the abdomen, and then the *peritonium* surrounding the liver is generally covered with a membrane or coat of coagulable lymph. This form of the rot has been frequently confounded with the resp, or red-water, though it differs from the latter disorder in the colour of the effused liquid, in being much less disposed to putrefaction, and in several other particulars.

3dly. "Abscesses in the liver exhibit another termination of this malady. They are seldom considerable enough to kill immediately; but, in consequence of the absorption of purulent matter from them, the sheep frequently waste away, and die hectical or dropsical. When the collections are small, sheep will recover sufficiently to bear lambs, for three or four seasons, and afterwards become tolerable mutton.

4thly. "The most common termination is in schirri, or what the shepherds call knots in the liver; I have seen the whole substance of this important viscus so full of small, roundish lumps, or schirrous bodies, that it was difficult to find any sound part in it. The first attack is unfortunately so very insidious, that the disorder is scarcely observable before the animal begins to waste and lose flesh. In this advanced state, it is said to labour under the rot, or *pourriture*, from overlooking the commencement of the disorder."

Equally various with the conjectures respecting the origin of this destructive disease, are the remedies which have been recommended. The late eminent botanist, Miller, advised *parsley* to be employed as a preventive, which is eaten with great avidity by sheep, (the delicacy of whose flesh it greatly improves,) as instances have occurred where sheep, fed on parsley, remained sound, while those in the neighbourhood were affected with the rot. Mr. Mills, therefore, recommends sheep to be fed with that vegetable twice in the week, for two or three hours each time. In places where the rot is usual, it will be advisable uniformly to fold sheep, (where that practice is retained) before the dew falls, and to confine them in such folds till it evaporates, both in the spring and summer; feeding them with sweet hay, or other dry provender. In the Bath papers already referred to, it is remarked, that no ewe is ever subject to rot while she has a lamb by her side; and it is there recommended, to place sheep that are affected with this distemper, so that they can get at the bark and young shoots of elder. Mr. Price (in the same practical work,) advises every farmer to remove bis sheep, in wet and warm seasons, from such lands as are liable to occasion the rot; but, if this object cannot be obtained, he directs a spoonful of common salt, and a like quantity of flour, to be given to each sheep in a pint of water, once or twice in the course of the week, by way of preventive. And in case the disease be in an incipient state, he is of opinion, that the giving of such a dose for four or five mornings successively, will probably effect a cure; for the additiun of the flour and water not only abates the pungency of the salt, but also disposes it to mix more gradually, and consequently more effectually, with the chyle. The late Dr. Darwin, however, conceived that salt would be more efficacious if it were combined with iron filings and flour, and made into a ball, to be given every morning successively for a week. Further, as a preventive, it has been recommended by Mr. Varlo, an experienced agriculturist, to give each sheep a spoonful of common salt once a week, when a "*rotting season*" is apprehended; and, when the animals are accustomed to it, he directs some dry salt to be laid on flat stones, in various parts of the pasture, as they will then lick it up without any further trouble.

Having devoted such a considerable space to the examination of the causes, &c. of this destructive malady, the reader will, we trust, pardon the prolongation of this article, on account of the following very important operation, which is practised by the German sheep-farmers, and the happy effects of which have been *incontestably proved.** We refer to the *inoculation* of sheep for the rot, which produces in them the same effect as variolous inoculation does on the human frame. The inoculated animals contract the disorder, the symptoms of which are very mild, and the recovery from which is both speedy and certain. From the experiments which have been made, it has been proved, that *inoculated flocks are protected from all contagion.*—Rams, tainted with the rot, have been coupled with inoculated ewes, which, together with the lambs that have sprung from these embraces, have presented no symptom whatever, of the rot.

"The inoculation is performed by making an incision in the inner face of the thigh, from which the wool is stripped, about four fingers distant from the anus. The incision must penetrate the skin; but care should be taken not to wound any muscle, lest an effusion of blood should ensuc. A pustule of an infected animal is next squeezed with the fingers; and, after taking away the virus thence issuing, on the point of a lancet, it is transferred to the wound of the individual which is intended to be inoculated."

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*Lasteyrie's "Histoire de l'Introduction," &c. p. 193.

M. Lasteyrie also states, that experiments have been made in France, with a view to ascertain whether *vaccine inoculation* would preserve sheep from the rot. The results he had been able to obtain (1802,) appeared to him satisfactory; and he thinks it probable, that this new preservative may be advantageously substituted for that we have just described.* *To be continued.*

ESSAY ON THE NATURAL HISTORY OF THE MULE; AND ITS VALUE FOR THE GENERAL PURPOSES OF AGRICULTURE IN COMPARISON WITH HORSES.

By Governor Wright.

To the Honorable the Committee on Volunteer Premiums.

The patriotic invitation of the Honorable Robert Oliver, by his premium for the "best Essay on the Natural History of the Mule; and its value for the general purposes of agriculture in comparison with the Horse," has induced me to submit the following Essay.

Whether the mule was created by the Great Creator, or procreated, from other animals, under the direction of man, is a subject necessarily involved in the consideration of the natural history of that animal.

Aristotle, Varro de re Rustica, Collumella, and Theophrastus, tell us that in Phrygia, Syria, Cappadocia and Africa, there were a sort of mules that were prolific. Streno is said to have examined the organs of generation of the mule, and to have found the ova therein, and a sort of placenta about them, which persuaded him, that mules might generate; but his observations are said to be fanciful, and his conclusions unworthy so great a naturalist. Pliny relates, that the species of animals are in Africa various and changeable; that the great scarcity of water, brought the beasts of the forest to the pools to drink, and the males and females thus mixing, produced unnatural love, so as to create the proverb—"That Africa was always producing some new monsters." But Dr. Shaw in his Travels in Barbary, says that all things there are the same as elsewhere, except the mule and the kumzah, which are produced from other animals under the direction of man, and not properly left to themselves; and that there is little ground for the proverb, "Semper aliquod novi Africam afferre."

The mule, in natural history, is called a mongrel kind of quadruped, *usually* generated between the ass and the mare, *sometimes* between the horse and the she ass. They are said to be a kind of monster, and therefore do not breed, any thing in the suggestions of Aristotle and the other ancient writers on the subject to the contrary notwithstanding.

We find that the animals created by the great Creator, were directed to increase and multiply in their *kind*, and afterwards we find it recorded that the great Jehovah, renewed that injunction, and made a covenant with Noah and the animals that were saved in the ark, that they should never be destroyed by another flood, and sealed that covenant with his rainbow.

The preceding authorities and remarks, with the experience that we have had on the subject, as to the mule's breeding, must satisfy us that the mule was not the work of the great Creator, and that his command to the animals of his creation to increase and multiply, *each* in their *kind*, amounts to an affirmative pregnant—confirmed by the barrenness of the mule.

Having thus presented the evidence of the non-creation of the mule, but of its procreation by the intervention of man, I shall proceed to examine its attributes, the very name mule, and the proverb, "as stubborn as a mule," go far to fix their outlines. Here permit me to remark, that should any gentlemen be of the opinion that the mule was an animal originally created by God, they will no doubt unite with me in admiring the wisdom of his providence, in placing such *an animal*, in such a clime, with such a *soil*, among such a *race*. But should they think, it is not an animal originally created, and can reconcile themselves to the violation of the order of nature, and the unfitness of things, I am persuaded that the large mule, properly treated, and correctly broke, might be valuable in many important branches of agriculture; they may well be compared with the *common* horse, and are at least as valuable. The small mule may be profitably used in a small plough, for horticultural purposes, and if bred from the full bred mare, would be greatly improved. A mule of Mr. Sutton's, bred from a full bred mare, took the premium at the Easton Cattle Show, and was indeed a beautiful animal. The small mule, I have observed, is generally slow, and from its size appears to labour in the plough or cart, and as it advances in age becomes more and more slow;—so that its reputed longevity, for which by many it is prized, forms with me a strong objection, as the sooner we get rid of that which is of little or no value, the better. The Chinese law, which authorised the putting to death their children, might more economically have been exercised by putting to death their superannuated—a custom among some of the Indian tribes. The idea that the mule may be kept on less than the horse, I have no doubt is well founded; but, when it is considered that every farm that is worth cultivation, produces more long forage than the stock it ought to keep can consume, it certainly, as to the article of long forage, is rather an objection, as the passing it through the animal, ameliorates the quality, and increases the quantity of manure, and is much better than when spread in its original state. As the quantity of grain necessary for a work horse ought not to exceed ten quarts per day, the highest quantity given to a race horse—there cannot be much saved with the mule, in my judgment. We are forbid to muzzle the ox that treadeth out the corn, and I must enter my protest against starving the mule that maketh the corn. It is a well known fact, that a lean horse performs better on the turf than a fat one, and I presume also in the plough—as the same cause always produces the same effect. Place a pair of common horses in one plough, and a pair of common mules in another, each of the ordinary quality of the horse and the mule, and the weight and physical strength of the horse will soon test the preference of the horse by his dispatch—besides the time saved of the driver, far exceeding the difference in their food. But as the proposition was no doubt intended to promote the interest of agriculture by its discussion, I will present to your view a pair of full bred horses in the plough, pressing forward with eager volition, scarcely to be restrained by the happy, whistling ploughman, and compare them with the team of common mules, creeping on, the ploughman swearing, and with a mule goad forcing them along, but in a pace so slow, and with a countenance so rueful, that you would be led to believe he was a wretched convict, working in a *tread mill.*

That the large mule is preferable to the common country horse, I am prepared to admit, and I have no doubt would sell for nearly double the price of the country horse; but as I know the object of the honourable mover of this proposition was intimately connected with the best interests of agriculture, and intended to elicit such a discussion as was calculated to promote that interest; in pursuance of that object, I shall attempt to prove, that as it is the interest of the agriculturist to effect the highest grade of perfection, in every thing necessary to agriculture—and as the labour-saving machine is so correctly preferred, and profitably used, instead of the modes it intended to correct, though in the outset somewhat dearer: I am authorized, then, upon the same principle, to say, that a time-saving machine is as much entitled to the preference of the farmer, and as promotive of his interest, as the labour-saving machine.

It is, therefore, the duty of the agriculturist, I know from experience, to use the full bred horse in his teams, whose superior worth, velocity and last, is so fully tested on the turf. Does any man doubt that the full bred horse, who can run four miles in eight minutes, which the country horse cannot run in sixteen, is not twice as valuable as the country horse? particularly in a trip for a doctor or a midwife?

If then the foot and bottom of the full bred horse is so far beyond the country horse, is it not the duty of the farmer to get that stock, although his original cost shall be double that of the country horse, which, not like the barren mule, but the self-sharpening plough, will continue its own stock, and preserve its own excellence?

Having thus compared the horse and the mule, as to the direct purposes of Agriculture, I must call your attention to the common incidental duties of the farmer, in the performance of which the horse or mule must be used. He has to go to church, court, mill, and market. The farmer may plant, but Jehovah must water. I will then, in a great drought, suppose two neighbouring farmers, equi-distant from the church, both going to it to pray for rain—the one on horseback, the other on a mule. The one on horseback arrives in time, and devoutly implores the great Ruler of the Universe to bless them with rain—the one on the mule arrives only time enough to say Amen. But mark them on their return—the one on horseback flies ahead of the dust, and reaches home time enough for a hot dinner—while the one on the mule, if peradventure he is not smothered in the dust, keeps the family waiting, and gets home to "eat his mutton cold." They set off to mill together, mounted, the one on horseback, the other on the mule. The one on horseback gets there and has his grain ground first, as the miller's rule is, "the first come must be first served," and the one on horseback gets home long before the one on the mule, and much time is saved, which Doctor Franklin has justly said is money. They set off together, mounted as before, to court, as jurymen The one on horseback arrives in time to answer to his name, the other does not get in in time to save his distance. and has to pay the costs of an attachment. They set off to market, mounted as before—the one on horseback arrives in time to the first of the market, and gets the best price for his market-stuff—the other, all spattered to his knees, arrives at the fag-end of the market, and can hardly dispose of his market-stuff at any price.

I suggest the case of the female part of the farmer's family mounted on mules, destined to church, court, mill, or market, merely to arrest so catastrophic an occurrence, which I trust my well known devotion to the sex will induce them to forgive—and for their relief remark, that the medals of Julia and Agrippina show us that the equipages of the Roman ladies were drawn by mules, which is also the case with the princes of Spain. The princes of Denmark are drawn by rein-deer—the great Mogul by oxen.

I must now apologize to the horse, the noblest animal of creation, for in any wise comparing the mule, a monster, with him, though we are allowed to compare small things with great. The master of the horse has described the fine horse, as possessed of the following noble properties. The breast, the hips, the mane of the woman, the countenance, the intrepidity and fire of the lion, the eye, the nostril and the joint of the bullock, the nose, the gentleness and the patience of the sheep, the strength, the constancy and the foot of the mule; the head, the leg and the short hair of the deer; the throat, the neck and the hearing of the wolf; the ear, the tail and the trot of the fox; the memory, the sight and the turning of the serpent; the running, walking and the suppleness of the cat.

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* Lasteyrie, p. 194.

The horse is divided into five classes: 1st, the race-horse; 2d, the war-horse; 3d, the coach-horse; 4th, the hunter; and 5th, the pack-horse.

The race-horse, in the Olympic games, established by Hercules, attracted the early attention and admiration of the delighted spectators. The tocsin sounds—see him mounted for the race, with his neat rider, decked in the costume of the day, champing the foaming bit, straining upon the start, and exhibiting his herculean powers, his foot and bottom, and gaining the prize. Mark the delighted victor, with his friends, rending the skies with their shouts of joy, and treating them with the nectar of the gods—which, at the present day, is not to be had; but for which, at Canton, the sporting winners substituted the generous madeira and the foaming champagne; whose names (Sewell and Sleeper,) I record, that their noble example may be nobly followed.

What figure would the mule cut?

The bugle sounds—then comes the war-horse, of the same noble blood; for the turf is admitted to be the nursery for the cavalry; and in this country, bisected, as it is, by noble streams, the cavalry, mounted with rifles, under the auspices of the immortal Jackson, moving with their known celerity, would form one strong arm of the nation—and by their velocity, would possess an ubiquity that would enable them to meet an invading foe at every point, protecting our happy shore, and perpetuating those liberties secured by our great charter—sealed with the blood of our patriots, and recorded in the blood of our *heroes*, and the *great Lafayette*. The early use of the cavalry stands recorded in the charge of Constantius on the squadron of his brother Constantine, and throwing him off the saddle, in his attempt to supplant him in his government.

I ask again, "what a figure would mules cut?"

The bugle sounds—then come the chariot-horses, neatly caparisoned—fixed to the chariot, with the proud charioteer, neatly dressed, prepared and used in war, and so celebrated in the olympic games, with which their patrons of antiquity were so delighted, and Horace so elegantly describes, that I will give it in his own words:

> "Sunt quos curriculo, pulverem Olympicum,
> Colligese juvat, metaque fervidis,
> Evitata rotis, palmaque nobilis,
> Terrarum Dominos, evahit ad Deos."

(*Translated thus by R. W.*)

> "With joy some boast the 'lympic dust to hurl,
> With glowing wheels to graze the winning goal;
> And victors, gain the prize, the golden palm.
> For which a seat among the gods they claim."

What a pretty figure would the mule cut?

Next comes the high-bred hunter, prepared for the chase—his master neatly mounted, with a horn, summons the deep-toned hounds to join him in the chase. Mark the hunter's agile footsteps, and with what caution be steps among the hounds, the companions of his sport; the fox unkennelled, see how he leaps over hedges and ditches, steering his course by the cry of the hounds. On a loss, mark his still and listening attitude—and on a recovery, see how keenly he again pursues the cry of the hounds, to be in at the death, and crown his master with the brush.

What a pretty figure would the mule cut?

Lastly, comes the sturdy pack-horse, prepared for the pack, which weighs two hundred and forty weight, or seventeen stone, two pounds; and see how kind and rapid he moves with this burthen, and with ease performs his task to the great pleasure and advantage of his master.

What a pretty figure would the mule cut?

Which is humbly inscribed to the Hon. Robert Oliver, by his humble servant,

ROBERT WRIGHT.

ALDERNEY CATTLE.

Baltimore County, 26th Sept. 1825.

John S. Skinner, Esq.

Sir—I am much surprised to learn from your American Farmer of the 23d inst. that any doubts exist of the cattle imported by Mr. Creighton in 1819, being Alderney, but more particularly so at the assertion of your correspondent Curwen, who says, "That Mr. Creighton's cattle came from Alderney, has never been denied, but that they were what are called in Europe 'Alderney,' or have been received in America as such, has been contested from the date of their importation." How, or where Curwen obtained this information, I am at a loss to conjecture, for it is new to me; but having become possessed of a bull and cow of said importation, which I had the best evidence for believing to be pure Alderney, and having sold their descendants *as such*, it becomes proper for me to state such facts as will bear me out in such belief.

Mr. James Creighton imported the cattle in question, in the summer of 1819, and he published in the American Farmer, vol. ii. page 101, the following statement:—

"The above cattle (two bulls and four cows) I bought in the Islands of Guernsey and Alderney, and was assisted in the selection of them by Col. M'Rea, of the Royal Invalids, in the former island, and by the Governor (Col. le Messurier) of the latter. They are of the pure Alderney breed; the bull which Mr. Henry Thompson purchased, obtained two prizes from the Agricultural Society of those islands, and was esteemed one of the finest animals that had been raised for many years. I bought them without any desire of making money by them, and they were offered to several gentlemen here before their arrival, at cost and charges; they were finally sold at auction for much less than I paid for them."

Now I ask, if it was likely that Mr. Creighton would publish this statement, if he did not *know* the cattle described to be *pure Alderney*, as also if he had not a better opportunity of ascertaining this fact when on the spot, and assisted by the most respectable characters, than any person can have in this country, who never heard of the animals until they arrived here. At the public sale these cattle were uncommonly low in flesh, having had a very long and hot passage; nevertheless, they sold together for $1215, which Mr. Creighton asserts, "was much less than he paid for them,"—a tolerable good evidence this, of the estimation in which they were held in their native country, and I should presume, something more than would have been given for animals *not known* to be of genuine blood.

Curwen publishes the opinion of the judges of our Agricultural Cattle Show in support of his hypothesis, wherein they express doubts of a bull shown as genuine, and descended from Mr. Creighton's stock, but "they presume there must have been some accidental cross in his breeding." I was present on this occasion, (and had my Alderney cow there) but understood that the opinion of the judges did not arise from any doubts of the original importation being genuine, but that "a stray bull had jumped into the pasture." On this occasion, in corroboration of this impression, one of the judges called the attention of his associates to examine my Alderney cow, and pointed out what appeared to him some striking difference in their form and points, with a view to show that the young bull was of doubtful origin, but I did not hear a word expressed of my cow being considered other than genuine; and in further corroboration of this fact, I beg to refer to the report of the same judges, and at the same time, who say, "Mr. J. S. Skinner showed a very heavy and finely formed Alderney cow-calf, of seven months old, of great promise for another year." This calf was out of my cow, and was at the same time sold to one of the judges for $150, and taken to another state. I would here ask, if it is not probable, that if the judges had not believed the calf to be a genuine Alderney, they would have hesitated in giving the same opinion as in the case of the young bull.

If your present correspondent Curwen, is the same who addressed you in vol. iii. page 153, he has certainly changed his opinion of Mr. Creighton's importation, for he there states, that "Dickson has said, and we have always thought that Alderneys are 'peculiarly fitted' to ladies and lords; but unhappily Alderneys appear to think that we are not fitted for them, since Mr. Haines' imported Alderney bull, killed a man at Wilkesbarre, and was shot. Captain Thompson's imported bull shewed the same inclination, and was condemned to the yoke. Mr. G. Howard's imported bull, for the like disposition, is shut up for life." The latter two were of Mr. Creighton's importation, and thus evidently admitted by Curwen to be Alderneys.

Mr. Reuben Haines is, I understand, well acquainted with Alderney cattle, he examined my cow, milked her, and pronounced her a genuine Alderney. Many other gentlemen have frequently seen her, and given the same opinion most decidedly; but, in particular, the late Mr. Robert Patterson, who became well acquainted with the breed in England, but particularly at Cheltenham, where he boarded with a person who kept one Alderney cow expressly to supply rich milk and cream for his visitors, and which he, [Mr. P.] informed me was as much like mine in form, colour, and all other qualities, as any two animals could possibly be.

Last, although not least in my estimation for good judgment, I must be permitted, Mr. Editor, to refer to yourself, who, in vol ii. page 79, Amer. Farmer, thus express yourself upon this subject —"Having heard and read of the extraordinary richness of the Alderney's milk, a few days since we improved of the opportunity which was very politely offered us, to judge *for ourselves*—we saw the Alderneys and other cows milked, examined and compared each at different periods after milking, and we are firmly persuaded, that the Alderney milk taken in the morning and divested of its cream, at 2 o'clock, P. M. is then richer than the milk of the common cow when first drawn. It may be distinguished in the pail or the dairy, with half an eye, by its rich *yellow colour*, which passes through the cream and displays itself in the butter." The above described milk was taken from my cow, one of Mr. Creighton's importation; and I hope enough has been stated to satisfy the most sceptical of their having been the pure and genuine race of Alderneys; how, or where Curwen has imbibed a different opinion, and for what reason published, I am at a loss to conjecture, but hope he will now be satisfied of his error; and I return him my acknowledgments for his urbanity towards myself in the concluding part of his communication.

Yours, respectfully,

HENRY THOMPSON.

ON PLANTING COTTON.

Dear Sir, *Eastville, Va. Sept.* 8, 1825.

Allow me to return my thanks to the "Cotton Planter," for his prompt and satisfactory reply to my inquiries respecting the cotton press.

Having experienced, last spring, the tedious method generally adopted of planting cotton by hand, I have lately directed my attention to the subject, endeavouring to substitute some means by which the labour might be diminished. In this I have succeeded beyond my most sanguine expectations, and all who have seen my machine in actual operation, have pronounced it perfect, in all it undertakes to perform.

Supposing the land to be listed at a proper distance, this machine opens the drill, drops the cotton in any quantity required, and at regular distances, covers it lightly and rolls it, at one operation; leaving the ground in the most beautiful order, with all the clods removed or crushed. It will also, if desired, manure with ashes or plaister of Paris with great regularity, merely by mixing it with the seed in the hopper. The seed does not require to be soaked, or any other preparation. It may also be regulated in two minutes to drop the seed at any distance, according to the strength of the soil. I have not yet made any experiments to ascertain how much it can perform in a day, but believe that, supposing the land to be first listed at four feet distance, that it would plant from ten to twelve acres.

It is intended also by removing the *opening, dropping, covering*, and *rolling* part of the machine, and applying the proper fixtures for the purpose, that it shall give the cotton the first working after it comes up:—clearing off all the grass on both sides of the bed to within an inch or two of the plant, and go over as much ground as in the first operation. This machine is perfectly simple, may be made by any common carpenter in two days, and would not cost, complete, more than from six to eight dollars.

I must beg leave to trespass once more upon your kindness, and inquire of my friend the "Cotton Planter," and, if I may so far presume, of Mr. Charles E. Rowan, well known to your subscribers, and any other of your correspondents to the south, who may notice this, whether or not any machine, answering the above description, or used for the above purpose, is known in their section of the country;—and if not, whether it would be considered a useful one; as their long experience may have discovered a more ready method of planting than is practised here; this being our first year of experiment.

I will avail myself of the first conveyance from this shore to send you one of them for your inspection and opinion, and I am much in hopes that with some further improvements in contemplation, it will not require the aid of a horse, but be moved along by hand, with as much ease as an empty wheelbarrow.

I am respectfully, &c.
FRANCIS H. SMITH.

EASTON CATTLE SHOW AND FAIR.

Easton, Sept. 20, 1825.

The Trustees of the Maryland Agricultural Society, for the Eastern Shore, have *resolved*, that the Cattle Show and Fair, to be held at *Easton*, on the said shore, on Thursday, Friday and Saturday, the 3rd, 4th, and 5th of November next, for the *exhibition* and *sale* of *live stock, agricultural implements*, and *household manufactures*, be conducted according to the following arrangement; and that the following *premiums*, be offered and awarded to the owners of the best kinds, that is to say:—

CROPS.

For the best crop of ¼ of an acre of Turnips, not less than 50 bushels	$5 00
For the best crop of one acre of Potatoes, producing not less than 200 bushels .	5 00
For the best crop of ¼ of an acre of Parsnips, not less than 75 bushels . . .	5 00
For the best crop of ¼ of an acre of Carrots, not less than 50 bushels . . .	5 00
For the best crop of ¼ of an acre of mangel Wurtzel, not less than 250 bushels .	5 00
For the best crop of ¼ of an acre of Ruta Baga, not less than 75 bushels . .	5 00

In every instance satisfactory evidence as to the cultivation and the product must be exhibited, together with the samples of the crop; also a statement of the time when the crop was sown or planted.

HORSES.

For the best Stallion over 3 years of age,	$15 00
the second best do. do. .	10 00
the third best do. do. . .	5 00
For the best Mare over 3 years of age .	10 00
the second best do. do. . .	8 00
the third best do. do. : .	5 00

ASSES AND MULES.

For the best Jack over 3 years old .	10 00
Fo, the best Mule do. do. . .	10 00
the second best do. do. . .	5 00

CATTLE.

For the best Bull over 2 years old .	15 00
the second best do. do. . .	10 00
For the best Bull under 2, and over 1 year,	10 00
the second best do. do. .	5 00
For the best Milch Cow over 3 years old,	15 00
the second best do. do. do. .	10 00
the third best do. do. do. .	5 00

Certificates will be required of the quantity of milk given and the mode of feeding for thirty days, together with the quantity of butter produced in one week; the date of the week from the time of calving being specified.

For the best Heifer under 3, and over 1 year,	$10 00
the second best do. do. .	5 00

OXEN.

For the best yoke of working Oxen :	15 00
the second best do. do. . .	10 00
For the best stall-fed Beef . . .	10 00
the best grass-fed do.	5 00

SWINE.

For the best Boar	8 00
the second best do.	6 00
the third best do.	4 00
For the best Sow	8 00
the second best do.	6 00
the third best do.	4 00

SHEEP.

For the best Ram over one year old .	8 00
the second best do. do. . .	5 00
For the best Ewe over one year old .	8 00
the second best do. do. . .	5 00
For the two best Wethers over two years old,	5 00
the two second best do do. .	3 00
For the two best Wethers under two years old,	5 00
the two second best do. do. .	3 00

IMPLEMENTS OF HUSBANDRY.

For the best Agricultural Machine or Implement that may be considered new, and as deserving of the notice of the society, and worthy of patronage . .	10 00
For the best Machine for threshing out wheat, the cost of which shall not exceed one hundred dollars	25 00

HOUSEHOLD MANUFACTURES.

For the best piece of Kersey not less than ten yards	5 00
For the best piece of Kersey, (cotton warp) fit for labourers, not less than ten yards,	5 00
For the best piece of Flannel not less than ten yards	5 00
For the best piece of Cassinet not less than ten yards	5 00
For the best piece of Carpeting not less than twenty yards	5 00
For the best Hearth Rug . . .	4 00
the second best do.	3 00
the third best do. . . .	2 00
the fourth best do.	1 00
For the best Counterpane . . .	5 00
the second best do. . . .	3 00
For the best piece of Linen Sheeting not less than twelve yards	5 00
For the best piece of Table Linen not less than ten yards	4 00
For the best piece of Towelling not less than ten yards	3 00
For the best pair of knit woollen Stockings,	1 00
For the best pair of knit cotton Stockings,	1 00
For the best pair of knit thread Stockings,	1 00

Each of a size for men or women.

☞ The dying of all domestic fabrics to be done at home.

BUTTER.

For the best sample of Butter, not less than five pounds, nor less than one week old,	5 00
For the second best do. particulars as above,	4 00
For the third best do. do. . .	3 00
For the best sample of potted Butter, not less than 10 lbs. nor less than 3 months old	5 00
For the second best do. particulars as above,	4 00
For the third best do. do. . .	3 00

☞ A statement of the manner of making and preserving it will be desired.

FERMENTED LIQUORS.

For the best sample of Cider of a preceding year, the premium to be given to the person making the same . .	$3 00
For the best sample of home made Wine,	2 00
For the best sample of home made Cordial,	2 00

PLOUGHING MATCHES.

For the best Ploughing by 2 horses or mules,	5 00
For the best Ploughing with oxen . .	5 00
To the successful Ploughman with 2 horses,	2 00
To the successful do. with oxen .	2 00

The above premiums will be awarded only for animals bred within the State of Maryland, or within the District of Columbia. But male animals of the several kinds above specified, may be entitled to premiums though bred out of the State and District, provided the owner of such male animal shall secure his continuance in the State of Maryland to be bred from, for one year from the granting of the premium.

It is to be understood no premium shall be awarded merely for want of competition. And where the objects presented for premium shall be considered as possessing no merit worthy of encouragement, the judges shall have a right, at their discretion, to withhold such premiums.

Persons having animals that have heretofore taken premiums, may enter said animals for premiums of a higher grade than those heretofore awarded to them.

In no case will any premium be given for live stock, unless the owner shall have notified Mr. Samuel T. Kennard, of Easton, of his intention to offer for the same, and shall have entered the particular animal with him ten days previous to the Exhibition, stating himself to be the owner of such animal, and the manner of feeding and rearing it, together with its age, pedigree, disposition and other qualities, as far as practicable. And those persons who intend offering more than one kind of stock for premium, are required to make a separate communication for each description of stock, so intended to be offered. Persons having fine animals, though not intended to be offered for premiums, will gratify the

Society by exhibiting them in their field; and for the purpose of making proper arrangements, and stalls for the accommodation of all stock offered for premiums or for show, it is requested that all persons intending to offer stock for show only, as well as those offering them for premiums, should give notice to Mr. Kennard of such intention, at least ten days prior to the Exhibition. All premiums awarded by the committee shall be distributed in articles of plate.

The Trustees believing that it is neither just nor reasonable for those who are well able to aid in promoting the general welfare by cattle shows, to receive the honours and advantages of the society, without contributing something to its support, have

Resolved, That no landholder shall receive a premium for any article, who is not a contributor to the amount of membership. But all tenants and others, not being the owners of land, may contend for premiums in like manner as members. And this exclusion does not extend to any *females* who may exhibit domestic fabrics or other articles, for premiums.

An auctioneer will be appointed, and the sale of live stock and articles exhibited, will be made on the second day. Food will be provided for such stock offered for premium or show, as shall be accommodated in the stalls.

By order of the Trustees,
NICHOLAS HAMMOND, *Chair'n.*
Test. Sam. T. Kennard, *Sec'ry.*

☞ The editors of papers in this State, and in the District of Columbia, and the states of Pennsylvania and Delaware, friendly to plans for the improvement of agriculture, will confer a favour by inserting the above in their respective gazettes.

[*Easton General Advertiser.*

MEMOIRS OF THE PENNSYLVANIA AGRICULTURAL SOCIETY—IN ONE VOLUME OF 320 PAGES—A VALUABLE AGRICULTURAL WORK—*for sale.*

This volume is elegantly printed, and is embellished with fine copper-plate engravings of Colonel Powel's Bull, Wye Comet—Broad-tail, Dishley, and Southdown Sheep—Shepherds' Dogs—Threshing Machines, Straw Cutters, &c. Of the value of the work, the best opinion may be formed by perusal of the following table of its contents:

Constitution—List of Officers and Members—Act of Incorporation.

LIVE STOCK.

Bailey's Survey of Durham, Extracts—Carpenter, Henry A. Esq. of Lancaster county, on improved Durham Short Horns—their Docility, Hardiness, and Properties as Milkers and Quick Feeders—Churchman, Mr. Caleb, on Sheep, their Management, Product, &c.—Chne on the Forms of Animals—Cully on Live Stock, Extracts on Neat Cattle; on Sheep—Featherstonhaugh, G. W. Esq. Corresponding Secretary of the New-York Board of Agriculture, on various Breeds of Cattle, Management, Characteristics, Draught Oxen, Superiority over Horses, Prevention and Cure of certain Diseases—Haines, Reuben, Esq. on Alderney Cattle, the Extraordinary Properties of their Milk, and "Valuable Carcasses"—Kersey, Mr. Joseph, on the Use of Tar in Preserving the Health of Sheep—Lawrence's General Treatise on Cattle, Extracts—Lincoln, the Honourable Levi, President of the Worcester County Agricultural Society, on Breaking, Feeding, and Working Oxen, the Advantages of Improved Short Horn Cattle for the Dairy and Shambles—Miller, Wm. J. Esq. on Merino Sheep, their Management, Increase and great Importance in the best Modes of Husbandry, as proved by the product of his Farm—Parkinson on Alderney Cattle—Powel, John Hare, Esq. on Various Breeds of Cattle; on the Importance of Neat Cattle to our Manufactures and Comfort, their various Products, &c.; on Imported Cattle, their injudicious selection, Devons not good Milkers, Superiority of New England Oxen for Draught, their Excellence not to be ascribed to Devon Blood, Herefords better than Devons, Worthlessness of Alderney Cattle; on the Evils of Soiling in a Country where Land is Cheap and Labour is dear; on various Breeds of Sheep, their Origin, Peculiarities, and Properties; on Breeding Sheep, &c.; on the Sagacity and Usefulness of the Spanish Shepherds' Dogs; on Swine—Parkinson on the Shepherd's Dog—Reed, Alexander, Esq of Washington, Penn. on Merino Sheep, their Management, Food, Diseases, and the Effect produced on their Health by the Use of Salt, Ashes, and Burnt Clay, combined—Rose, David, Esq. of Delaware county, on Merino Sheep, their Management and Increase—Rudd, Bartholomew, Esq. of Marton Lodge, England, on the Properties, Points, Characteristics and Excellence of Improved Durham Short Horns—Scotland, Extracts from General Report, contrasting the Properties of Dishley. Cheviot, and other Breeds of Sheep, and exposing the System of their Management—Sebright, Sir John S. Letter to Sir Joseph Banks, Bart. on the Art of Improving the Breeds of Domestic Animals—Strickland's Survey of the East Riding of Yorkshire, Extracts, on Neat Cattle; on Sheep—Smith, Robt. esq. President of the Maryland Agricultural Society, on the Management of Dairy Cattle, the distribution of their Manure, the Advantages of steaming Fodder, Mode of accelerating the Production of Cream, &c.—Tomlinson, Mr. John, of Philadelphia county, on Cream afforded by the Milk of an Improved Short Horn Heifer—Williams, James, Esq of Philadelphia county, on Fattening Bullocks with Carrots and Mangel Wurtzel—Young, William, Esq. of Philadelphia county, on the Selection of Sheep, their Fleeces, &c.—Young's Survey of Sussex, Extracts detailing the Points and Advantages of Southdown Sheep, &c.

CROPS.

Davy, Sir Humphrey, on the Diseases of Plants, Mildew, Hessian Fly, Rust, &c.—Elliot, John, Esq. of Montgomery County, on Millet—Featherstonhaugh, G. W. Esq. on Root Crops, their Importance—Lincoln, the Honourable Levi, on the Culture of Indian Corn—Miller, William J. Esq. on Egyptian Millet and Rape as green Food for Sheep and Neat Cattle—Powel, John Hare, Esq. on Root Crops, profitable in America but for particular objects; on Grub Worms, Small Birds their Natural Enemies; on making Hay, Hay Houses, Pennsylvania Barns, Arrangement of the Fold Yard; on Millet, its Uses, Cultivation, &c.; Answers to Inquiries on Millet and Orchard Grass, &c.; on Millet; on Mangel Wurtzel; on Reclaimed Marsh and its Crops—Prince, J. Esq. of Roxbury, Massachusetts, on Carrots, Potatoes, &c.—Robeson, Peter, of Philadelphia county, on Smut in Wheat—Thomson, J. G. Esq. of Philadelphia county, on Mangel Wurtzel—Washington and Alleghany counties, extraordinary Crops produced in—Williams, James, Esq. on the Cultivation of Carrots &c.—Worth, James, Esq. of Bucks county, on the Failure of Wheat Crops, and the Insects by which they are assailed.

FENCES.

Kirk, Caleb, Esq. of Delaware, on Thorn Hedges—Montgomery County Farmer, on Hedges, Collecting and Sowing Seeds, Planting and Managing the Fence—Phillips, William, Esq. of Philadelphia county, on the Preservation of Posts by means of Salt—Worth, James. Esq. on Fences.

IMPLEMENTS.

Eastman, Mr. Jonathan S. of Baltimore, on his Chaff Cutter—Goodsell's Flax Dresser, Report of the Committee appointed to examine—Phillips, William, Esq. on Eastman's Chaff Cutter—Powel, John Hare, Esq. on Cultivators, and the best Modes of American Husbandry, as fitted to our Climate and the Circumstances of the Country; on Chaff Cutters, and feeding Neat Cattle.

MANURES.

Sir Humphrey Davy's Elements of Agricultural Chemistry in a Course of Lectures for the British Agricultural Board, Extracts on Manures, Animal, Vegetable, Calcareous, their Management, Application, and effects, exposing erroneous Opinions, and Practices connected with the use of Lime, Gypsum, Ashes, and Rotted Dung—Powel, John Hare, Esq. on Oyster-shell Lime, the Management and Application of Vegetable, Animal, and Calcareous Manures, in America.

FLAX.

Besnard, Peter, Esq. Report on the Mode of Cultivating, Securing, Steeping, and Preparing Flax in the Netherlands, contrasted with the Irish Methods—Radcliff's Agriculture of Flanders, Extract, On a new Method of Steeping Flax.

MISCELLANEOUS.

Milnor, Mahlon, Esq. of Bucks county, on cider—Morris, Mr. Jonathan, of Washington county, Pennsylvania, on Maple Sugar, its Manufacture, &c.

The publisher is desirous of disposing at once of the remaining copies, 500, of this impression, and for that purpose has reduced the price to $1 per volume; or six volumes will be forwarded to any one who will send a $5 note to the Editor of this paper, by mail, at his risk.

PROSPECT OF CROPS.—EXTRACT.

Edisto Island, S. C. Sept. 20, 1825.

So disastrous a season as the present, we do not remember ever to have witnessed. Our cotton crops now bear indubitable evidence of the desolations that have assailed them. The little fruit that the wind and rain had spared, has recently been destroyed by the caterpillar, and naught now remains in our fields but half devoured pods and leafless stalks. The whole earth is one moving mass of worms, writhing in agony, for the want of food. This, sir, is no exaggerated representation. That entire district of country, in Georgia and this state, within which *the finer cottons* are raised, has been attacked by the caterpillar, than which there is not a more destructive reptile that crawls. On this island, our crops will not average more than fifty pounds to the acre. Our potato crop is unusually promising.

HORTICULTURE.

CURE OF DISEASED FRUIT TREES.—SIMPLE REMEDY FOR SCOURING IN HORSES AND CATTLE.

Claverash, 17th Sept. 1825.

John S. Skinner, Esq.

Dear Sir,—In the early part of June last, I examined the trunk of a large and aged Peach tree, and found an unusual number of large and small maggots: I carefully removed them from their cells, and applied a quantity of charcoal to the roots of the tree. I then placed a great number of the young tribe: and three of an unusual size on the coal, all soon became torpid, and in a few minutes perished; I then introduced a small quantity of pulverized coal to the diseased parts, which soon became hardened; the tree has produced a fair crop of fine peaches, and appears perfectly healthy. This experiment confirms the truth of my former statement, and I think proves the efficiency of the remedy. (American Farmer, vol. vi. page 34[illegible].)

Having observed in a late number of your paper, a remedy proposed for looseness or scouring in horses and cattle, which appears to me very complex, I am induced to state a simple remedy which I have used with uniform success for several years.

A good feed of scalded wheat bran, with about two quarts of clean wheat, has uniformly, in the course of a very few hours, restored the animal to perfect health, and enabled him to prosecute his labours. Several cases of this kind have ocrurred to my working oxen during the extreme heat of our last summer. and in no one instance has the remedy failed of producing the desired effect. It is desirable that the animal should be kept for at least half a day on dry food,

Very respectfully, yours,
J. REETSEN VAN RENSSELAER.

LADIES' DEPARTMENT.

[From the Bulletin des Sciences.]
Bulletin No. 4, *April*, 1824.

CAULIFLOWERS.

Method of raising cauliflowers to make them produce during the winter, by Mr. G. Cockburn, gardener to W. S. Poyntz, Esq. (Philosophical Maganzie, December, 1823, page 404.)

Mr. G. Cockburn, in presenting to the Horticultural Society a cauliflower of uncommon size and beauty for this season, (13th of January, 1823,) gave the following account of the method he always used to bring them to such perfection. This is done by sowing the seed of the early kind in the beginning of July, in a bed exposed to the south. As soon as the plants come up, they should be thinned, so as to leave 12 or 14 inches between each plant, which by the 15th of November will head, and be from 10 to 30 inches in circumference. As this kind of cabbage cannot bear more than 3 or 4 degrees of cold, the plants should be taken up with a large lump of earth, about the last of November, the dead leaves taken off, then placed in mould, in a close situation, and sufficiently protected from the cold of at least 10 degrees. In replanting them, a space of at least an inch should be left around the head. The last care is to watch them daily, to take off the dead leaves, and cut for use the heads that are spoiling. When it is very cold, they should be covered with short dry hay. This method furnishes a sufficiency for use during the fall and winter months, even as late as February.*

Bulletin No. 8, August, 1824.

(Journal of Agriculture de Moscow, pp. 99, 100.)

THE SQUASH, OR VEGETABLE MARROW.

Mr. Fischer, member of the Agricultural Society of Moscow, has presented to the society a squash, which was brought to England about two years ago. from the Levant. It is known in England by the name of the vegetable marrow, and is designated by Mr. Fischer as the *cucurbiter medullaris;* its culture is highly recommended on account of its great productiveness. During the last summer, Mr. Fischer obtained 160 squashes from two seeds, which had been planted late in the botanical garden of Gozenki.* When they attain about half their size, they make an agreeable dish, either raw or roasted, to which is added a little butter. They are so very tender as to have been compared to marrow; preserved in vinegar, they are excellent. When they attain their full growth, they are not then fit for the table, but are a very good food for animals, particularly for hogs. Mr. Sabine, secretary of the Horticultural Society of London, was the first who made mention of this vegetable in the memoir of that institution, and it is from him that Mr. Fischer obtained the seeds.† They are cultivated without much trouble.

Bulletin No. 7, July, 1824.

NEW METHOD OF CULTIVATING GOOSEBERRIES.

The method proposed, is to place the branches in a vertical direction, then tie the ends in the form of an arbour, for this purpose, plant two rows of young gooseberry bushes, the most vigorous you can find, leaving three feet between each and five and a half between the rows—select from each stalk four straight branches; and between each, leave a space of nine inches for fear of accidents, however, it would be well to leave one or two more near each stalk, plant a pole of about five feet, to that you tie the branches of the gooseberry bushes; as soon as they grow as high as the poles, make an arbour or covered walk of wood or iron, giving it in the middle an elevation of seven feet or more, then take up the poles, tie the branches of the bushes to the corresponding part of the arbour, which in less than six years will be entirely covered. The management of gooseberry bushes is very simple; in the spring, cut the lateral branches very near the stalk, in such a manner as to keep separate those which you intend to remain. The only precaution necessary, is to keep the middle stalk upright and to cut the branches every winter above the first joint, (knot;) by the above plan the fruit will be finer, more abundant and can be gathered with greater facility; by thinning the fruit, it will attain a greater size. This method of cultivating gooseberries, *(en espalier,)* is much esteemed by those who have tried the experiment.

MISCELLANEOUS.

ENTOMOLOGY.

Dear Sir, *Philadelphia, Sept.* 16, 1825.

The insect, of which Mr. E. Buck enclosed specimens in his letter, is called by the French writers, *Teigne des blés*, and, by classic authors, *Oecophora cerealella;* it is originally an inhabitant of the southern part of Europe, extending as far north as the southern departments of France, where it is well known by the serious ravages it commits on the wheat of those countries.

In order to ascertain some remedy for this new mischief, it will be necessary to become acquainted with the habits of the insect, the time and place of depositing its eggs, &c. We should also be curious to know the extent of its depredations.

I remain, as usual,
Your obedient servant,
THOMAS SAY.

N. B. I have not forgotten the insect that feeds within the wheat stalk; but I wish to see more of it before venturing any remarks on the subject.—T. S.

In York, there is a watchmaker, who exhibits a living flea, with a chain round its neck.

The Gloucester iron-masters have reduced the price of iron 2*l.* per ton.

SPORTING OLIO.

ON THE LENGTH OF GUN BARRELS.

J. S. Skinner, Esq.

Dear Sir,—I observed a writer in your last Farmer, who is of opinion that a gun barrel of two feet two, or two feet, would shoot further than one of a greater length. I shall not argue the point, but tell a few simple facts. I am now an old man, and when young, shot as often or oftener than any in my neighbourhood. During the years from 1774 till 1783, I shot much at water fowl and canvass backs. I had an old Queen Ann's musket, about 4 feet two inches in the barrel, and carried twenty-one buck shot; she chambered three oz and was thought the best in these parts. An acquaintance of mine procured a ducking gun, as they were then called, eight feet in the barrel; she was exactly of the same calibre as my musket. I had heard of the shots made by her, and wished to try her with mine. I shot them I suppose fifty times at wooden houses, at a sheet of paper extended on the houses, and the result was, the eight feet gun would put as many shot into a square of any dimensions, sixty yards, as mine would thirty yards. She was unwieldy, to be sure, and could only be shot with a rest. I saw no difference in the force. A gentleman in the same neighbourhood, who was a great killer of canvass backs, had a gun about five feet in the barrel, carried a pound of shot at three loads; he had good shores to shoot from, the ducks came near, say fifty yards; he preferred his gun of five feet generally, but when the flock was further out, on account of the tide being out, he preferred the eight feet.—Some time after, the eight feet got hurt, viz: bent near the muzzle, and was sent to a gun-smith's to straighten; he cut off eighteen inches, and it was observed by the owner she did not shoot as well as before. I have a gun carries seventeen balls to the pound, (4 feet 6 inches.) I will shoot her against any gun two feet two, or three feet one inch. An objection to short guns is, unless they are three feet three inches, you cannot lodge the muzzle in the bend of your left elbow, to load, which is a great convenience. A short gun is, to be sure, best to shoot at a bird that rises within fifteen or twenty yards of you, as she will scatter more and give you the greater chance; but at forty or fifty yards, will scatter so much that the chance will be two to one against hitting.

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* A lady, who is distinguished for the great interest which she takes in all agricultural and horticultural improvements, and whose garden, under her immediate superintendence, is well supplied with a great variety of fine fruits and vegetables, on seeing the above, very kindly furnished me with the following directions for cultivating that delicate vegetable the cauliflower, which is always raised in her garden in great perfection, different from Mr. Cockburn's advice, as more suitable to our climate. She directs the seeds to be sown in March, as soon as general appearances indicate a settled state of spring weather. They are sown in moveable boxes, as well to protect the infant plants from the inclemencies of the weather, as to secure them from the ravages of insects. Should they be required for early transplanting, it will be necessary to sow them in hot beds Seeds which are sown in open boxes, produce plants large enough to be put out in May or June;—which is an excellent time to transplant. They should then be planted at the distance of two feet, taking care that the soil should have been previously well prepared, by proper tillage and manure—it is well to leave a hollow around the roots to retain the water. Well rotted manure is preferable; and if some vegetable mould be added, it will be much better, as well calculated to keep a more constant moisture; in fact, it is owing principally to our very dry and hot summers, that so many failures in raising this vegetable occur. Besides selecting therefore, if possible, a situation favorable for a proper degree of moisture, it is highly necessary to pay the greatest attention to have the plants well and constantly watered. It is recommended by some to hill up the earth around the roots to the lower leaves of the plant, which should be done from the middle to the last of September; it is said to assist them in the formation of the flower—as the experiment is so simple it is worthy a trial. About the same time the leaves are gathered in at the top and are tied. As soon as winter makes its appearance, she directs that the plants should be covered with earth in the same bed in which they grew, by loosening the earth with a spade, (but taking care to preserve it around the roots;) they are bent in an oblique direction until the heads of the plants come in contact with the earth—they are then completely covered with it to a sufficient depth to resist the frost. It is worthy of remark, that many which were covered in this way last fall, say in November, and which had not the appearance of a bud at the time, furnished in February, on opening them, fine flowers both as to size and flavor, a sample of which, Mr. Editor, I believe was sent to you, Plants which are intended to flower in the spring, as late as March, may be put out as late as the first of July; the seeds, in that case, should be sown in the month of May, in order to give them vigour before transplantation takes place.

* The first botanical garden in Russia, in the immediate vicinity of Moscow, belonging to Monsieur the Count Nicholas Romanzoff.

† [Seed of it was brought to this country, a few years since, by Mr. Poinsett.]

I have been much in the habit of making experiments in shooting. I have shot in calm weather, balls on the water; first horizontally, then elevated the gun to one foot at the muzzle, then two feet, and so on, until I could not see where the ball struck.

For want of a proper place and assistant to make the observation, I am well satisfied a good musket, loaded with the best powder, and just as much as she would burn, would throw a ball one and a half miles, at forty-five degrees elevation. I have shot my four feet six inch gun through five inches of poplar scantling, and can prove I have shot a ball through the blade of a broad axe.

RECIPES.

CAUTIONS IN VISITING SICK ROOMS.

Never venture into a sick room in a violent perspiration, (if circumstances require a continuance there for any time,) for the moment the body becomes cold, it is in a state likely to absorb the infection, and receive the disease. Nor visit a sick person, (especially if the complaint be of a contagious nature) with an *empty stomach;* as this disposes the system more readily to receive the infection. In attending a sick person, stand where the air passes from the door or window to the bed of the diseased, not betwixt the diseased person and any fire that is in the room, as the heat of the fire will draw the infectious vapour in that direction, and much danger would arise from breathing in it.

TO PRUNE ORCHARD TREES.

The object in pruning young trees, is to form a proper head. The shoots may be pruned in proportion to their lengths, cutting clean away such as cross one another, and fanning the tree out towards the extremities on all sides; thereby keeping it equally poised, and fit to resist the effects of high winds. When it is wished to throw a young tree into a bearing state, which should not be thought of, however, sooner than the third or fourth year after planting, the leading branches should be very little shortened, and the lower or side branches not at all, nor should the knife be used, unless to cut out such shoots as cross one another.

The season for pruning orchards is generally winter or early in the spring. A weak tree ought to be pruned directly at the fall of the leaf. To prune in autumn strengthens a plant, and will bring the blossom-buds more forward; to cut the wood late in spring tends to check a plant, and is one of the remedies for excessive luxuriance.

TO CLEAN PAPER HANGINGS.

Cut into eight half quarters a stale quartern loaf: with one of these pieces, after having blown off all the dust from the paper to be cleaned, by means of a good pair of bellows, begin at the top of the room, holding the crust in the hand, and wiping lightly downward with the crumb, about half a yard at each stroke, till the upper part of the hangings is completely cleaned all round; then go again round with the like sweeping stroke downward, always commencing each successive course a little higher than the upper stroke had extended till the bottom be finished. This operation, if carefully performed, will frequently make very old paper look almost equal to new. Great caution must be used not by any means to rub the paper hard, nor to attempt cleaning it the cross or horizontal way. The dirty part of the bread too must be each time cut away, and the pieces renewed as soon as at all necessary.

THE FARMER.

Baltimore, Friday, September 30, 1825.

Tobacco.—Amount of inspections in the state warehouses, during the last week:

Warehouse, No. 2, ...	161 hhds.
Warehouse, No. 3, ...	347 "
Total, ...	508

VACCINATION.

The undersigned devotes his professional time exclusively to the business of Vaccination, and to the preservation of the genuine vaccine matter for the use of others.

Physicians will be regularly supplied with matter for any period of time they may agree for not less than six years, for an annual fee of five dollars, payable in advance.

Tickets will also be issued from this institution, that will entitle any Physician or other citizen of the United States to vaccine matter on the following terms, viz. *Private Tickets* at *ten dollars* each, that will entitle the holders of the same to fresh matter as often as they may have occasion to use it for *three years;* and *Public Tickets* at *thirty dollars* each, that will entitle all persons residing in the neighbourhood of any particular Post-Office, (large towns and cities excepted) to the same privileges for a like period of time. Private Tickets are to be held by the purchasers themselves, and for their own use; and Public Tickets by the Postmasters, through whose particular offices all applications for matter forwarded must be made.

All the privileges of this Institution, and advantages heretofore offered to Physicians and others, will be secured to them agreeably to their respective engagements with the undersigned.

Surgeons of the Army and Navy of the United States, will be furnished with genuine vaccine matter at all times for the public service, free of any expense.

No letter addressed to the undersigned will be received at any time, unless the postage thereon is paid.

JAMES SMITH.

Vaccine Institution, Baltimore, Sept. 16, 1825.

☞ The introduction of the small pox into North Carolina about four years since, and which occasioned the repeal of the Law "to encourage Vaccination," was not the result of any mistake made by Dr. Smith, as he was at first induced to believe. It has been since discovered and shown, that this fatal occurrence is to be attributed entirely to a wicked trick, that was unsuspected at the time, and could not have been guarded against by any person. For a more full account of it, however, the reader who feels interested is referred to a letter, addressed by Dr. Smith, 3d February, 1824, to Mr. Clay, Speaker of the House of Representatives, and to a subsequent report of a Committee in Congress, to whom it was referred. This report exculpates Dr. Smith from all blame, and recommends the adoption of his entire plan for the general distribution of the vaccine matter.

FOR SALE.

Four South American Jack Asses, from 2 to 5 years old, measuring between 11½ and 12 hands high, imported into this country by the subscriber, on board the ship Oryza, from Buenos Ayres. Apply at E. R. Sinners' hotel, Water street, near the Exchange.

Sept. 23, 1825. C. A. COOKSEY.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9 50	10		
BACON, and Hams, . .	lb.	7	10	11	
COFFEE, W.I. Green, .	—	18	19	20	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	20	23		
Georgia Upland, . . .	—	16	13		
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An advance of 1 cent	—				
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CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	7	10	12	15
FEATHERS, Live, . . .	—	33	35		
FISH, Herrings, Sus.	bbl.	2 62	2 75	3 00	
Shad, trimmed,	—	6			
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	5 00	5 37		
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	4 50	4 75	none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	50	57		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	92	98		
do. Red, ...	—	90	95		
Buckwheat, ...	—	55	75		
Rye, ...	—	55	56		
Barley, ...	—	50			
Clover Seed, Red . .	—	5 00	5 50	6 00	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	2			
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	30		35	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1 50			
HEMP, Russia, clean, .	ton	165	180		
HOGS' LARD, ...	lb.	10	11		
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	23	25		
MOLASSES, W. India,	gal.	34	37		50
MEAL, Corn, kiln dried,	bbl.	3 00			
NAILS, 6a20d.	lb.	6½	7	8	9
NAVAL STORES, Tar,	bbl.	2 50			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2			
OIL, Whale, common, .	gal.	27	30		
Linseed, ...	—	60	65		
PORK, Baltimore Mess,	bbl	14 50	15		
do. Prime, . . .	—	11			
PLASTER, cargo price,	ton.	5 50			
POTATOES, ...	bush	75	1 00		
RICE, fresh, ...	c.lb.	3 25	3 50		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	29	31		
PEACH BRANDY, 4th pr	—	80	1 00		
APPLE BRANDY, 1st pr	—	34	35		
SUGARS, Havana White,	c.lb.	13 00	14 00		
do. Brown, . .	—	11 00	12 50		
Louisiana, ...	—	9 50	11 00		
Loaf, ...	lb.	19	22		
Lump, ...	—	16	18		
SPICES, Cloves, ...	—	80	90		
Ginger, Ground, . . .	—	7	8		
Nutmegs, ...	—	1 75			
Pepper, ...	—	17	18	25	
SALT, St. Ubes, ...	bush	40	42		
Ground Alum, ...	—	50			
SHOT, all sizes, ...	cwt.	9 50		10 00	
WINES, Madeira, L. P.	gal.	2 00	2 50	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	3	3		
Port, first quality, . .	gal.	2 00		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by John D. Toy, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

DISEASES INCIDENT TO CATTLE IN GENERAL.—The Rot in Sheep.

(*Concluded from p. 219, American Farmer.*)

Besides these *preventive* remedies, various medicines have been recommended to the attention of farmers and breeders; though we conceive they can only be employed with probability of success in incipient cases. Of these remedies, we select the following: 1. Put a handful of rue into a pailful of water in the evening, and on the following morning add such a quantity of salt as will make a brine strong enough to float an egg. Half a pint of this infusion is to be given as a dose, every other day, for a week. 2. Infuse soot in strong brine and stale urine, and give each animal six or seven spoonsful for eight or ten successive days. 3. Ellis recommends a peck of malt, or more, to be mashed and brewed into twelve gallons of wort, in which a quantity of bloodwort, comfrey, pennyroyal, plantain, sage, shepherd's purse, and wormwood, are to be boiled; the liquor to be worked with yeast, some common salt to be added, when it is to be put into a cask for use. Of this medicated beer, seven or eight spoonsful are to be given to each sheep, once in the course of a week during wet weather; but with longer intervals in dry seasons.

Among other remedies, we would here notice a patent which was granted to a Mr. Thomas Fleet, in October 1794, for a medicine, which he affirms will not only prevent the rot in sheep, but also check the farther progress of the disorder in such as are already affected; *so as to render them capable of being fattened on the same herbage which produced the disease.* His restorative medicine consists of the following articles, the proportions of which, however, are *not stated* in the specification of his patent, viz: alkanet root, antimony, Armenian bole, bark, camphor, mercury, opium, salt, sulphur, turmeric, turpentine, and distilled water; which multifarious ingredients are simply directed to be prepared *according to chemical, and compounded according to medical art.* (Not having had experience of the effects of this celebrated nostrum, we cannot say how far it answers the properties claimed for it by its inventor; hence we shall only add, for the information of such of our readers as may be disposed to venture a trial of it, that the remedy in question is prepared by a Mr. Thomas, of Basingstoke, in the county of Hants.)

We shall conclude these remarks on the prevention and cure of this tremendous malady, with the following interesting observations, selected from Dr. Harrison's valuable "Inquiry," already referred to:

"It is confirmed by experience, that whenever any place is laid dry by judicious management, it ceases to occasion the rot. For my own part I am acquainted with many sound parishes, which, during their open state, were so injurious to man and to other creatures, that I cannot sufficiently impress upon my readers the importance of effectual drainage, for the preservation of health. When, from circumstances, the land cannot be laid dry, during the summer months, it requires to be occupied with great caution, since moist grounds are the most prejudicial and dangerous to animal life. I have had occasion to observe, that miasmata are produced in some way or other by the sun's action upon moist ground, and, therefore, when it is well covered with grass, early in spring, we have less danger to apprehend, provided we maintain a deep herbage till the commencement of frosty weather.

"Mr. Young, of Claxby, is of opinion, that when land is well covered with grass, it becomes less dangerous to cattle. In 1792, he divided a flock of sheep, and placed fifty upon some good aftermath, where, in other seasons, the rot had frequenty prevailed. Only this part of his flock escaped the disorder, which he attributed to the meadow not having been grazed before it was well covered, and defended from the weather.

"Luxuriant pastures seldom rot, unless they be eaten bare in hot weather. Whilst the ground is well concealed, it is so completely defended and protected, that the sun exerts no deleterious effects upon it. In the fatal year, so often particularized, Mr. Elmhirst, of Bag Enderby, an experienced and zealous agriculturist, who occupied two hundred acres of land in the parish of Croft, near Wainfleet, sold all his heavy beasts, and many sheep, early in the summer. His pastures were thinly stocked with sheep only, during the rest of the year. The rot was extremely destructive in all the adjoining pastures, yet in his closes it never appeared. This exemption from the general calamity of his neighbours, he attributed partly to his land being always well covered with grass, and partly to his grazing during that summer entirely with sheep. In wet weather, beasts and horses, by treading the ground, leave footmarks, where the water stagnates, and in consequence of it, as he believes, the rot is produced. In justice to the testimony of Mr. Elmhirst, it may be proper in me to add, that he has been an active and judicious cultivator of land, on a large scale, for a great number of years, every observation of his is, therefore, entitled to particular attention.

"I have remarked, that sheep are most liable to rot immediately after losing their fleeces; and in the month of November when the cold first begins. No rot can be contracted without warmth, or in spring, before the sun's influence is become considerable; but, when the disposition is once acquired, it can only be subdued by frost, or a long succession of cold weather Gabriel Plats assures us, with confidence, derived from the experience of seventy-four years, that the only infectious months that beget the great rot are May and June, when excessive moistures befall those months. In a few instances, it has appeared in April, when showery weather and great heats have prevailed. In ordinary years, meadows may be irrigated till May, without any injury to the occupier. In doubtful cases, the generation of miasms will be effectually restrained, by continuing a copious and regular watering till the grass is well grown. The late Mr. Bakewell was of opinion, that after May-day he could communicate the rot at pleasure, by flooding, and afterwards stocking his closes, while they were drenched and saturated with moisture. In summer, rivers and brooks are often suddenly swollen by thunder storms, so as to pass over their banks, and cover the adjacent low lands. In this state no injury is sustained during the inundation; but when the water returns to its former channel, copious exhalations are produced from the swamps and low lands, which are exceedingly dangerous to the human constitution, and to several other animals as well as sheep. I formerly mentioned, that during the summer Mr. Harrison could give the rot to his sheep in a few minutes, by grazing them upon the moist soft land, from which the water of the barlings had just retired. While there is any current, the sheep will never become tainted, although they often wade in search of their food.

"When miasmata are once formed they preserve their noxious powers and destructive influence unimpaired, till the cold weather puts an end to their force and activity. In mild seasons, epidemic diseases have been known to afflict the human constitution during the greatest part of winter; and the pastures which have once become unsound, are only to be recovered by the setting in of frost, or a succession of cold days and nights.

"The autumn and winter of 1799 and 1800 were remarkably mild and warm. At Candlemas time, sheep that were pasturing on the fen and commons at Walshinbrough, near Lincoln, took the rot, and died in the following autumn. No farmer in that parish recollected to have suffered, at any other time, from the rot in spring. Mr. Thompson, of Horncastle, informs me, that many years since, his brother occupied a low, wet close in the parish of Hatton, and lost all his sheep, before winter, of the rot. From that time the land remained unemployed till about Candlemas. It was then filled with strong, healthy sheep; but they were all rotten, and many of them dead before the following May-day. He recollects, that there was very little frost during that winter, and consequently the effluvia were kept alive by the abundance of the herbage. Plats gives it for an infallible symptom, that when bees fail, and their hives feel light, a great rot of sheep is to be expected; which gives a very seasonable warning to bleed the sheep under the eye, or in the mouth, as oft as they see occasion in the end of summer, or in autumn; or to accustom those which are suspected, to lick salt in troughs, or to take some brine with dry food, as they may be easily trained to it by gentle degrees; or to force down a dose of salt, as is directed.

"Where necessity requires the pasturage of moist grounds in summer or autumn, the shepherd ought carefully to remove his flock into a dry situation before the evening, and provide them with corn and good hay, or green food."

Upon the whole, from whatever cause the rot may proceed, it is evident, that the chief thing on which the farmer can depend is, that of changing the situation of the sheep to a dry spot, or of keeping them in warm and well-sheltered yards, and regularly giving them sweet, dry keep. If medicine be necessary, let a ball be given daily, for a fortnight, composed of five grains of muriated quicksilver, and one grain of opium, in camphor or turpentine; increasing the proportions, if the operation be deficient, and with slight intervals, if the balls operate too powerfully. When the sheep begin to recover, salt should be constantly given them with dry food; and, when they are turned out, they should be driven to a dry, salubrious, and elevated sheep-walk, or into a salt marsh, if there be one in the vicinity.

14. The *Rubbers*, or *Rubs*, is a species of itch, which renders sheep extremely restless, and in consequence of which they rub themselves to death, being completely, but gradually exhausted, from not being able to feed. Their skins are perfectly clean; and, when dead, their flesh becomes of a greenish hue, without possessing any bad taste. Those animals which are fed on fine, rich soils, are more liable to the rubbers than those which are pastured on poor lands; and the disease usually terminates in the course of three or four months.—No effectual remedy has been hitherto discovered; though it is probable that relief might be obtained by washing the diseased sheep with strong soap-suds or ley, or by recurring to the remedies employed for the scab.

15. *Scab.* This disease is likewise known by the name of *shab*, or *ray*, and is attended with an intense itching, and cutaneous scabby eruptions, occasioned by the impure state of the blood It prevails chiefly in wet situations, and during rainy seasons; and as the scab is said to be infectious, the diseased animals ought, in every case, to be separated from the rest of the flock.

The scabbed should next be washed with a strong decoction of tobacco in brine, (in the proportion of one pound to two gallons,) to which a little oil of turpentine has been added; or, in inveterate cases, with a lather of black soap, lime water, or sublimate water, and oil of turpentine; sulphur and bay salt, or Glauber's salt, being administered internally. The following preparation has also been found effectual: Mix one pound of tobacco, one ounce of white arsenic, one pint of oil of turpentine, and six quarts of beef brine, with a small quantity of tar, and boil the whole till the ingredients become incorporated so as to form a liniment; in applying which every scab must be *broken,* and the sheep be well rubbed, that the liquid may penetrate every part. Another efficacious remedy was communicated by Sir Joseph Banks to the "Society for the Encouragement of Arts, Manufactures, and Commerce," in 1789, from whose Transactions for that year we have selected it.

Let one pound of pure quicksilver, Venice turpentine, and common oil, of each half a pound, and four pounds of hog's lard, be triturated in a mortar till the quicksilver is thoroughly incorporated with the various ingredients. In applying this ointment, the head of the sheep must be first rubbed; after which a furrow is to be drawn with the finger, from the region between the ears, along the back to the point of the tail, so as to divide the wool, till the skin be exposed to the touch. Then the finger, being dipped into the unguent, must be drawn along the skin; and similar furrows should be made down the shoulders and thighs, as far as the wool extends; and if the sheep be much infected, two other lines, or furrows, ought to be drawn parallel to that on the back; and one should also be traced downwards on each side, between the fore and hind legs. After this application, it is stated, that the sheep may be turned out among the flock without fear of communicating infection, as the blotches will in a few days dry up, the intolerable itching will subside, and the animals will be perfectly cured without any injurious effects resulting from the use of such unction. But this external remedy should, in the opinion of Sir Joseph Banks, be not delayed longer than Michaelmas.

But, says Mr. Hogg, (Shepherd's Guide, p. 96,) the most effectual cure is that which can now be got in any apothecary's shop, known by the name of *sheep ointment.* It is a strong mercurial composition; and the most safe way is, for the apothecary to put it up in small balls, each of which he may deem sufficient and safe to be rubbed upon a sheep at once; for as different hands may make it of different strength, the most experienced applier can hardly be a competent judge how much is sufficient for each animal, without some such precaution. Let the shepherd, then, take one of these balls at a time, and mix it with three gills, or a mutchkin of train oil, and if the animal be thoroughly infected, put the whole of this upon it, as close to the skin as possible; but if it is only scabbed or itching on some parts of its body, perhaps each of these mixtures may serve two. If the infected parts are mostly on the back, or upper parts of its body, the shepherd must make a shed, or opening of the wool, exactly on the very ridge of the back, from the crown to the tail; let him shed it clean to the skin, and keep it open with both hands, while another pours in the ointment from a common tea-pot. He must not keep the wool too close down with his hands, else it will cause the ointment to drip upon it. In this case, a few sheds, or openings, will do; but if it is scabbed about the belly and throat, it must be shed very thick, and the ointment rubbed on the skin with the fingers, as it cannot then spread in the skin by running. Let it always be done in dry weather; and it is a safe and certain remedy, though perhaps the scab may again appear on the offspring of this flock.

16. The *Tick* is a small, brownish, and flat insect, infesting sheep, and which, if not speedily destroyed, materially injures both the flesh and wool into which it insinuates itself. When the vermin have settled, scabs are formed on the surface, whence a small quantity of matter issues: as the insects increase in growth, the scab becomes proportionably larger, and at its full size nearly resembles a middling-sized horse-bean. In order to remove these noxious vermin, (which spread very rapidly,) it has been recommended to separate the wool, and to wash the diseased spots two or three times, or oftener, if necessary, with a liquid preparation, consisting of one ounce of cream of tartar, and a quarter of a pound of bay salt (both finely powdered and sifted,) and one ounce of corrosive sublimate, mixed together in two quarts of soft water. Or, four pounds of soft soap, and two pounds of arsenic may be steeped in thirty gallons of water, and the animals be immersed in the infusion, their heads being carefully kept above water, and the sheep sheltered from rain for one or two days. The wool must be closely pressed, and the liquor that runs off be caught in a tub, or other vessel, for future use. Of this application, it is sufficient to state, that it is approved of and used by those eminent agriculturists, Lord Somerville, and T. W. Coke, Esq., of Holkham-hall, in the county of Norfolk: the proportion above specified is sufficient to bathe forty lambs. The preparation by Mr. Preist, of Norwich [mentioned in Am. Farmer, p. 202,] may also be beneficially employed in this disease.

17. *Affections of the Udders of Ewes.*—After the lambs are yeaned, the lacteal ducts of ewes' udders are liable to various obstructions, in consequence of hard tumours being formed, which are accompanied with inflammation; and which, if not shortly relieved, will terminate in a mortification in twenty-four hours. As soon as such tumours are discovered, the wool must be shorn closely off, and the part affected be frequently rubbed with camphorated spirit of wine. Should suppuration ensue, the parts must be opened with a sharp knife, or razor, and the morbid matter expressed, when a little fresh butter, or any common healing salve, may be applied to the wound. Ewes, when thus affected, ought to be kept separate from the flock; and though one teat may probably be lost, yet she may be allowed to suckle her lamb; but when both teats are affected, there is no alternative but to fatten her off for sale, and to bring up the lamb by hand.

18. *White Scour.* This disorder is a peculiarly violent and uncommon looseness, occasioned by sheep feeding on putrescent vegetables, especially the shells of turnips, when suffered to lie on the ground after the flesh or pulp has been scooped out. The diseased sheep must be separated from the flock, and three large spoonsful of the following mixture be given them, every second or third day, as the nature of the case may require: Mix half a pound of finely powdered and sifted dry bay salt, with one pint of old verjuice, and then add half a pint of common gin. As poverty of keep is the primary cause of this malady, the animals must be allowed the best and most wholesome dry food.

19. *Wounds.* Besides the various casualties above specified, sheep are liable to receive injuries from being wounded by thorns, &c.; or worried, torn or bitten by mischievous dogs, or such as are not thoroughly broken in. Although such accidents may be in general prevented by due care and attention, yet in cases of common green wounds it may be necessary to apply some healing or emollient balsam or salve. With this intention, let one ounce of myrrh, a similar quantity of socotrine aloes, and four ounces of purified turpentine, be mixed with a quart of good brandy in a bottle. The vessel should be corked up and exposed for one or two weeks to a moderate heat, after which it may be strained off and preserved for future use in a closely-stopped bottle.

Lastly, the farmer or shepherd ought frequently, if not daily, to examine his flock, and see that their tails and buttocks be kept perfectly clean, otherwise they will become *tagged,* or belted, i. e. the skin will become excoriated and sore from the dung that adheres to those parts, especially when the animals are affected with the flux, or white scour. Where this is the case, the sheep must be taken into a dry, separate yard, and well washed with soap-suds, the wool around the sores being previously removed—after which the wounded parts may be strewed with finely pulverized white lead or chalk, and this may be succeeded by rubbing them with a mixture of brandy and tar.

DISEASES OF LAMBS.

It sometimes happens that lambs, when yeaned, are apparently lifeless; in which case it will be proper to blow into the mouth and nostrils—a simple expedient, which has been the means of restoring multitudes of these useful animals.

The *Black-water* is one of the most fatal maladies to which lambs are subject; the cause is not precisely ascertained, but the disease carries them off very suddenly, and occurs chiefly in the autumnal quarter. The best preventive hitherto known is, to keep them on very dry pastures.

The *Blood,* or *Red-water,* likewise often proves a mortal distemper to lambs. Its symptoms are, lameness and a slight swelling of the joints, accompanied with a violent inflammation that spreads over the whole animal, and which, if disregarded, terminates its existence in the course of twenty-four hours. This disorder is produced by too great a quantity of food remaining on the stomach, in a crude and undigested state. As soon, therefore, as the disease appears, the lambs must be taken home from grass, be bled, and an emollient clyster administered. Two or three ounces of castor oil, or as many grains of emetic tartar, should next be given, and the bleeding repeated, if no favourable symptoms appear; the treatment above specified being continued for four, five or six days, as the case may require; and, during that term, the lamb should be fed with milk.

The *skit* is a kind of scour, or diarrhœa, and is sometimes divided into *green* and *white,* according to the appearance of the dung. Give a decoction of hartshorn shavings and finely scraped chalk, in which a few grains of opium have been dissolved, and keep them on dry, wholesome food, in a well-sheltered yard.

DISEASES INCIDENT TO SWINE.

In the management of swine, various hints have already been given for the regular supplying them with food, and a due regard to cleanliness; these *attentions* cannot be too forcibly impressed, as, on account of the unruly habits of these animals, they are the worst patients with which a farmer can be tormented.

1. *Gargut.* This is an inflammatory affection of the udder, or bag, being distended with coagulated milk, whence the lacteal ducts are obstructed. It is chiefly occasioned by not *sucking down* in proper time; though too rich keep, before the time of farrowing, will also produce this malady. In slight cases, the udders may be bathed with camphorated spirits of wine; but as the young pigs will never suck their dams when the milk becomes vitiated, there is no alternative but gently to express the corrupted milk, if it can be effected; otherwise it will be best to kill the sow, which must necessarily perish from the inattention above noticed.

2. *Fever,* or *rising of the lights,* as it is likewise called, appears to originate from over-feeding; it may be removed by administering a mixture of sulphur and oil.

3. *Diseases of the Lungs.* These are generally accompanied with a dry, husky cough, and wasting of the flesh, occasioned by too great exposure to cold and wet. The best remedy is a warm, dry stye, with a regular supply of food that is calculated to keep them cool, and allay the irritation attendant on their cough.

4. The *Mange,* like the scab in sheep, is a cutaneous eruption, occasioned by inattention to cleanliness in hog-styes. It is easily known by the violent rubbing of swine against trees, or any hard substance, with such violence as to tear away the

head of the pustule, and to produce a disagreeable scab. When this disease appears, the animal affected must be separated from the rest of the herd, washed thoroughly with a strong soap-ley, and anointed with the following unguent, recommended by Dr. Norford, (Annals of Agriculture, vol. xv.) Incorporate one ounce of fine flour of sulphur, two drachms of fresh-pulverized white hellebore, three ounces of hog's-lard, and half an ounce of the water of kali, (as prepared in the shops,) so as to form an ointment. This is to be rubbed in at one time, and is said to be sufficient for a beast of six or seven stone: if properly applied, Dr. N. states that no repetition will be necessary, if the hog be kept *perfectly clean* after the cure is performed. In case there is a slight cough, he directs from half an ounce to one ounce and an half of crude antimony, according to the size of each animal, to be finely pulverized and mixed with his daily food, for ten days or a fortnight, when the swine will be perfectly restored. But if, from long neglect, the neck, ears, (especially in the large, lop-eared hogs,) or other parts become ulcerated, they should be anointed every third or fourth day with a little tar ointment, prepared by mixing equal parts of mutton suet and tar over a gentle fire, and straining such mixture while hot.

5. *Measles.* This disorder exists chiefly in the throat. which is internally filled with small pustules, or tumours, that sometimes appear on the outward surface of the neck. It is known by the languor and decline in flesh of the animal affected, and may be removed by giving small quantities of levigated crude antimony in his food.

6. The *Murrain,* or *leprosy*, in swine, is indicated by shortness and heat of breath, heads hanging down, staggering, and a secretion of viscid matter from the eyes. *Cause:* chiefly hot seasons, in consequence of which the blood becomes inflamed.—*Remedy:* boil a handful of nettles in a gallon of small beer, then add half a pound of flour of sulphur, a quarter of a pound of pulverized aniseeds, three ounces of liquorice, and a quarter of a pound of elecampane. Give this liquid in milk, at six doses; and keep the diseased animals on wholesome food. But the best preventive is to keep swine clean and cool in summer, and to allow no carrion, or filth whatever, to remain near their styes.

[*Complete Grazier.*

HESSIAN FLY.

Dear Sir, *Queen Anne's county, Oct. 1st,* 1825.

Having now a little leisure, and feeling something more in the mood of prosing than happens once in a year, I will avail myself of this opportunity to state to you, that the corn crops in this and the three adjoining counties are, in my opinion, shorter than I have ever known them; even in that disastrous corn-year of 1816, when the crop was ruined by frost in every month in the year, and when the practical philosophy of that day taught us to believe, that the absence of the usual quantum of heat was caused by the large spots on the disc of the sun, which were obvious to the naked eye for months together. I suppose, like other matters of farming, a few years more of experience will settle the disputed question, and a certain knowledge, whether they are the means of increasing, or abating heat. We shall ascertain whether these spots be burning mountains in the sun, or some other irregular intruders, thrusting themselves between the glorious orb they seem fixed upon, and the one less luminous, on which we are stationed.

I am thoroughly persuaded, and it is the current opinion, that from the severe drought, and intense heat without moisture, that the four counties spoken of will not make as much as will be requisite for their own consumption, with even more strict economy than is usually practised. The season having been liberal till July, in moisture, there was an abundant harvest of straw; but either from the unusual June storm, or the sudden and violent explosion of heat just before the proper time of ripening arrived, the grain in nine cases out of ten is miserably light and defective; and he who this year has made two-thirds of a full crop of pretty good wheat, is among the most fortunate of farmers.

We had but little hessian fly, (I use the vulgar name,) and something more than usual of the fly that depredates in the centre of the straw, and the liberal rains in the spring and early summer, nullified the ravages of these insects, where the land was, as we call it, "in good heart." The season having arrived for sowing wheat, I propose to arrest your attention while I indulge in a few old fashioned reflections upon that subject, which probably may fatigue you before I have done. The subject is an important one, as so much is at stake upon judicious or injudicious management; and to devise means to avoid the great enemy of the wheat crop, has racked the brains for a long time, of us all. The idle fancy that the hessian fly passes a part of his existence in the *grain,* and thus is perpetuated, sprung up in Pennsylvania twenty-five years ago; and as fast as experiment and light upon the subject irradiates it in one place, you have found it springing up in another. The opinion yet exists, and it will continue to exist, so long as the grain is perforated and devoured by another insect. Without stopping to prove this negative position, which any sceptic may prove to his own satisfaction, with the aid of a little scalding water, or quick-lime, I will lay down a few affirmative positions, and thence make the deduction, that although we cannot extirpate the fly, without totally abandoning the wheat crop, we may yet, by a little *concert* against the common enemy, circumscribe his mischief within much narrower limits than is his present sphere.

The first position, then, which I shall affirm is, that wheat is the favourite and almost exclusive plant which affords sustenance to the hessian fly.

2d. That the hessian fly, like other insects and animals, is increased and multiplied by the quantity of food afforded him, and that to continue the race of every new flight of fly, it is necessary to it, to find the plant in that particular stage of growth somewhere, which is known to be suitable to it, upon its first escape from the chrysalis.

3d. That from the correct time, as given by Gen. Cocke, required for the progress of hatching and existence, till the maturity of this insect, which has been witnessed by almost every farmer, it is evident, there are constant successions of broods throughout the *whole of the year,* from March till November.

4th. That the stock of fly is at its lowest ebb in July and August, when the wheat plant is in the most unpropitious state to nurture it; and is again after that period amply replenished by the food from the vegetation of wheat in the stubbles in wet seasons, and by the hand of the seedsman—when one farmer will begin in August and another finish in December, and the whole interval be filled up by somebody in the neighbourhood at work!

Hence I draw this conclusion: that the hessian fly is an enemy that we cannot successfully war with *single handed;* and that to keep him down we can only succeed by an united effort. To extirpate him I believe impossible, without, as I before said, giving up the crop. If, therefore, a county or a state would agree to begin on a given day, and finish on a given day, there is on my mind no doubt that we might put this enemy at defiance; without such a regulation we cannot. Upwards of twenty years of my own experience, and a comparison of ideas with a great number of intelligent and experienced farmers, warrants me in saying, that the best time on this shore to begin, is from the 1st to the 6th of October, and to finish from the 15th to the 20th of the same month. This variation is to be regulated by the early or late setting in of cool weather, and cannot always be foreseen, as the weather that *follows* is more important than that which *precedes* the beginning.

I am one of a very few farmers who believe that wheat sown before the 1st of October is no better, nor generally so good, as that sown at that time, even if it escape the fly; although the prospects in the fall and winter may be much more flattering.

We farmers almost all hanker after being able to sow the last of August, or the first of September, because our forefathers were so successful; while we resolutely shut our eyes upon the fact. the winters then set in at least six weeks earlier than they now do. We act as if we doubted that this change is the regular effect of a natural cause, and as obstinately shut our eyes upon the changes wrought by the hand of man upon our western mountains and vallies.

Having troubled you with my premises and deductions, the soundness of which, few men are more competent to pronounce upon, than the editor of the Farmer, I will now mention a fact, parallel to which. every experienced farmer, perhaps in every old neighbourhood, may bring to his recollection. It is a very common thing in every neighbourhood, for some one farmer, once in four or five years, to take it into his head to begin to seed wheat early in September. If he is dashing and adventurous, or sees things more clearly than his neighbours, he will sow his field; if he is of the more wary, I will not say timid, character, he will sow one bushel or a few more to ascertain the fact whether his conjectures are true; that is whether it is better to sow early than late. In several of these experiments, I have seen tolerable success; but all that I have particularly noticed have been disastrous to the neighbouring fields without exception, and the success has only been seen by a comparison with the injured wheat, immediately around; not on comparison with wheat without the sphere of the mischief of the hot bed. I will therefore mention two experiments, the *first,* and another the *last,* that I have particularly noticed.

Mr. J. P. an old and intelligent farmer on Kent island, believing the island to be more exempt from fly than other places, determined to sow early in September. His crop although not fine, was the best in the immediate neighbourhood. The very late sown wheat that year was nearly totally destroyed; whilst all sown after Mr. P's, was injured. This induced several of his neighbours to try the like experiment the year after.

The neighbourhood was then filled with fly, and the result was, with the exception of one crop, Mr. J. W's, a wide spread desolation through the whole neighbourhood, with all the wheat both early and late sown; and these farmers hastened back to their October sowing.

The last instance that I mention, occurred immediately in my own neighbourhood, near the extremity of a long neck, not much infested with the insect, when we all sowed about the same time. Mr. W. R. sowed about twenty bushels of Lawler early in September, for experiment; then saved his corn fodder, and went on in October, to sow his crop. The result was that the twenty bushels of Lawler looked well through the fall and spring, but produced but a poor crop at last; and the residue of his field suffered much with the fly. The year following, his crop, and the farm next adjoining him, and adjoining next below mine, suffered very much more than any other farms within my observation, though there was but little depredation generally, and next to none from hessian fly on my farm.

The conclusion then that the sowing of a field or patch of wheat before the best time generally to begin, is both extremely mischievous in operation, as producing a nursery for the insect; and is in itself an unfair mode of comparison, because it sows the seed, for the destruction of the later sown wheat, with which it is invariably alone compared. These positions being proved to the satisfaction of *my mind,* by abundant observation and experience, I am induced to think that were I invested with despotic authority, the first act I would do, which would seem to savour of this power, would be to compel every man *not* to begin before a particular day, and not to sow after a particular day.

Physical force would of course be necessary to adopt and keep such a decree in force for three years. But I am well persuaded that moral force, would only be sufficient afterwards.

This castle in the air may be as baseless a fabric as many others that have been built before it; but it is fortunate for us all, that none of us in this flourishing country, have it in our power to build castles in the air at the *expense* of the rest of the community, without its consent.

We may, if our inclinations are so constituted, play the despot at our own risk, within the sphere of our own domestic circle; but here it must end.

There ought to be, there can be no other arbitrary government in this country, but the tyranny of public opinion; and public opinion is not a relentless tyrant.

There is a fly that attacks the centre of the stock, different from the hessian fly, but not much less destructive, and the same means is suggested for lessening the latter fly, applies with equal force to the former species. With the plan proposed, ploughing and effectual harrowing, or burning off the stubble, from *all* fields, would be useful auxiliaries, if they were practicable; but they are not, and I know of no way of clearing tolerably, the scattered wheat off the stubble, but by a good drove of hogs, so early applied, that they will not destroy the young clover if growing in the wheat field.

There is a favourable moment of 12 or 15 days, between the benumbing approach of cool weather, and the setting in of cold weather, when the insects are most apt not to spread, and when it is not too late for the cold to prevent a sufficient vegetation before frost, which is the most favourable time to sow; hit it who can.

ON TIMBER.

Mr. Skinner, *Suffolk, 10th August,* 1825.

I take the liberty, from very long experience, to tell you, that the principles laid down by the first class, in your late publication relative to the growth of oak timber, at the examination at West Point, *is entirely erroneous;* and which every wheelmaker in this part of the country could satisfy you of in five minutes, were you here, however ignorant he might otherwise be. The timber that grows in the open, wild field, that has a free circulation of air, is as far superior to that grown in the swamps, or on the declivity of hills, as that of live oak is to our common timber; and this I venture to state, my friends Commodore Barron and Capt. Elliott, will confirm; both of whom I presume you know well.

Now sir, for one other fact, which I am certain you do not know; that passed under my own eye, as well as that of Com. Barron's. About eighteen months since, I ordered a pump of about 25 feet of heart pine, as it was to be placed where it would be much exposed to the sun and wet weather, (sap being but for ship use.) Without knowing that the log I saw, by accident, at the blockmaker's, was a part from which my pump had been made; I asked him how he managed to get pine so free of sap, for there was not a particle in it, although it was at least forty inches circumference? His answer was, that the log had lain five years in the dock, subject to the ebb and flowing of the tide; that from the first twelve months it remained in the mud, after that time, it gradually rose with the tide, and that when he took it for use, very little of the log remained below the surface of the water at high tide. When you see Com. Barron, tell him I shew him this log at the blockmaker's, next to the Custom-house, at Norfolk, I will answer for it, that our friend Col. Thomas Tenant, is of my opinion.

The only reason I write this, is, to prevent our ignorance going to foreign countries, where I have much been, and well know how they will laugh at us when they see your publication on the subject here mentioned.

Suffolk, 25th August, 1825.

I cannot say what quantity of sap the pine log had when first put into the mud, but the blockmaker told me it had sap, and that, that operation extracted it all, and made it heart, entire; and which I believe was the fact. It is a fact, that felloes of wheels, made of highland oak, will last 20 years—when swamp and other, will not go beyond 6 years.

NANKIN COTTON.

Dear Sir, *20th September,* 1825.

I send you the clean cotton of six pods of the Nankin cotton seed I obtained, at the February meeting of the Agricultural Society of South Carolina. They weighed 527 grains; when hand-picked, the product was only 96 grains. This is a very bad turn out; though at this early season of the year, it takes a greater quantity of seed cotton to make a bag of 300 lbs. than later, when the cotton has been some time open. Indeed, the product of the short staple cotton not only much depends on the time it remains in the field unpicked, but also the kind of land—as old fields make much more of clean cotton, in proportion to the gross weight, than new or rich lands. The staple of this cotton appears weak and short, but as it is fine and silky, it may spin well. I have only one stalk of cotton out of more than twenty seed planted: they all came up, but perished from various causes. The stalk will be productive, having more than two hundred pods on it, and has not been more than usually cultivated, though in good soil. The seed appear as pure as those I received. The only cotton near this stalk, are, a few stalks of Pernambuco cotton, which, though from 6 to 10 feet, I do not expect will have a blossom this year. Should the *frost* keep off till January, I shall endeavour to save some of these stalks during the winter. If you can obtain the *opinion* of some manufacturer, and he will take the trouble, I will forward to you the product of this stalk of Nankin cotton. If the result of spinning the same be favourable, by selecting rich land and planting the seed wide apart, I could plant an acre the next season. I am, with respect,

Your obedient servant,
JOHN S. BELLINGER.

ON PACKING COTTON.

Richmond, Va. Sept. 3, 1825.

TO THE EDITOR OF THE AMERICAN FARMER.

I have seen in your paper of the 26th ult. a communication from a "Cotton Planter," in reply to the inquiries made on the most approved mode of packing cotton.

The precision and clearness of the description there given of the common cotton press, must be acceptable to inquirers; and being the established mode of packing, and tested by experience, it may be considered presumptuous in one not practically acquainted with the business to suggest, that there appear some defects in the plan, and those, perhaps, susceptible of correction.

The extreme slowness with which a screw must be turned by a horse in a *walk* of 80 or 90 feet circumference, and that for three-fourths of his time without any material strain on the screw, or employment of his strength, during which all hands are idle—must occasion a loss of time inconsistent with economy.

It is not a little surprising that wood-screws should be used at all, since it appears they involve the necessity of working out of doors, of course only in fair weather, and then, the whole fixtures are subject to such rapid decay as must render them eventually very expensive.

But as the first cost is with many the first consideration, permit me to describe a cotton-packer, which as a cheap, effective, convenient, and durable machine, will, I think, bear comparison at least with wood-screws.

Fig. 1. is a side view of a horizontal press working by a wheel of 6 to 8 feet diameter, and a pinion of about 1 foot diameter, by which the beam with driver attached, is moved forward and backward quite fast, (the wheel being turned by hand,) while the pressure is small; and when increased power is wanted, a lever of any convenient length is used, by inserting one end thereof between the arms of the wheel at the hub, and resting the lever on projections fixed on the side of the wheel-rim, (as shewn more plainly on Fig. 2.)

A ratchet wheel and pall, placed on the wheel axle close by the post, retains the beam and driver where forced. A friction roller supports the beam, and there may be another roller or post, at 8 or 10 feet distance, to receive and support the end of the beam, when it is run back. The driver may slide on two small ribs projecting on the floor of the packing box. The rack teeth on the beam may be of wood, except for 4 or 5 feet near the end, where the rack is of cast iron—as is also the pinion.

A machine of this description has, I am told, been used by a planter in Nansemond county, who found it to work well; but the pinion and all the rack teeth were of wood, and he has now substituted iron, as above described.

The advantages of this machine are, its cheapness and facility of operation, and occupying little room, it is protected from the weather. The driver is moved so readily, that no time nor pains are required in hand packing—but the packing chest is filled repeatedly, and the contents drove up to the bale-box, until enough cotton is accumulated to form a bale, when the lever is used.

A more effective and expensive machine is exhibited in Fig. 2, which is a perpendicular view of a screw-press, moved by a wheel in a manner similar to the first. The wheel is here attached to the end of the screw, as most simple; but it is obvious that the power may be multiplied if required, by the intervention of a cog-wheel and pinion: the other parts are so plainly designated in the drawing as to require no more explanation. This press possessing greater power will be preferred to the former, when the difference of expense does not prevent. A wrought iron screw of 4 inches diameter, running in a composition box, is preferable, but a cast iron screw, in a box of the same metal, would be substantial, effective, and cheaper. This machine, with a little alteration, is applicable to the plan of *drawing* the bale-chest against the driver, as mentioned by a "Cotton Planter."

That the horizontal presses are most convenient, will, I suppose, be generally allowed; and were it really desirable to employ the power of a horse, the means of doing so by a walk under the floor of the press, is sufficiently obvious. But a horse can be employed to advantage but a small portion of the time, viz. at the moment of greatest pressure, and as three or four men are by this machinery rendered abundantly competent to the task, it is not economy to employ a horse.

In the extensive tobacco factories of this city, the greatest pressure is given by four hands on a 9 feet lever, and that this pressure is greater than is employed in baling cotton, is proved by the fact that wood presses, of the strongest construction, are found inadequate to the resistance in pressing tobacco, which it seems is not the case with cotton-presses.

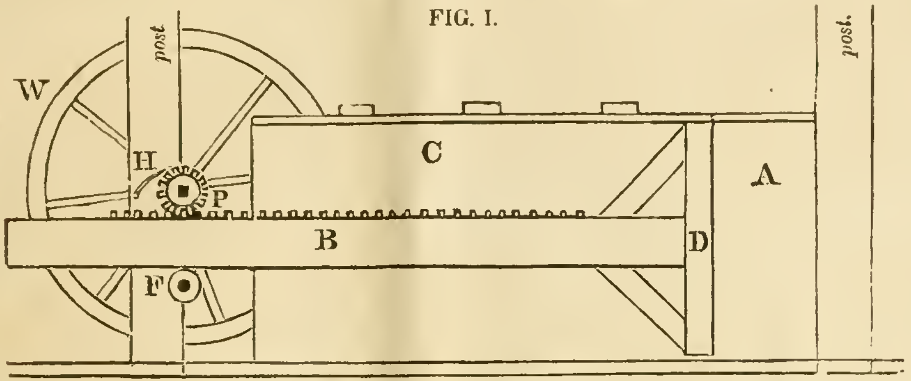
It will be obvious to those at all acquainted with mechanics, that by the introduction of an additional wheel to the rack press, and of a wheel and pinion to the screw press, both which may very conveniently be done; the powers of the presses may be increased in a double ratio, or to any extent the materials will sustain, and thus perhaps supersede the necessity of a lever on the wheel: it is at the same time to be recollected, that as power is increased, the velocity of the driver will be proportionably retarded.

I would suggest the idea, that in using a horizontal press, the bale might conveniently be disengaged by opening a trap-door under the bale-box, and shoving it through the floor into a room below.

Should I, in this attempt to improve an important branch of domestic industry, have advanced any thing contrary to the experience of others, I hope they will allow the public to profit by their better experience.

D. I. BURR.

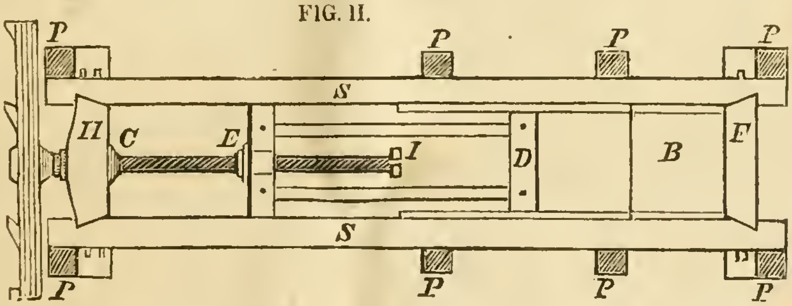
FIG. I.



A. *Bale box.* B. *Beam, with* F. *Friction roller.* P. *Pinion.*
C. *Packing box.* D. *Driver attached.* W. *Wheel.*
H. *Hand or pall, working on ratchet wheels behind pinion.*

THE ABOVE IS TO SCALE ¼ INCH TO THE FOOT.

FIG. II.



B. *Bale box.* F. *Foot block.* P. *Posts.* E. *Screw box, or female screw.*
S. *Sides.* D. *Driver.* C. *Collar of screw.* I. *Support for end of screw.*
H. *Head-block.*

SCALE ¼ OF AN INCH TO THE FOOT.

N. B. All the posts not at the corners may be substituted by diagonal braces.

RURAL ECONOMY.

THE MULBERRY AND SILK WORM.

This is about the time for the White Mulberry to ripen. We entreat the ladies, by all the regard they have for the most tasteful and elegant of dresses; and the men, by the desire they cherish to see their female friends elegantly attired, to gather all the fruit, fully ripened, and to save the seed.

Some may suppose that it will be a long time after the seeds are planted, before the Mulberry will be useful. Not so; in two, or at most, in three years, the leaves may be gathered in great abundance. An acre of ground set out with the Mulberry, would, in three years, be worth 300 dollars; and in five years 500 dollars. Be assured, the production of Silk may be made as profitable here as the production of Cotton at the south.

We learn that the public attention was turned to this subject, by different writers before the Revolutionary war: that the mulberry tree began to be cultivated: that the Italian white mulberry was introduced; that the worm was obtained and distributed in various parts of the state; that in Bethlehem considerable silk was made, and a premium obtained, which had been awarded by a society in Philadelphia, for the production of the largest quantity of silk; that in Chester county many ladies raised silk enough to make themselves dresses; that one, at least, has now a gown, the silk of which was obtained from worms of her own feeding, and that it was sent to England to be wove; that mulberry trees, both white and red, flourished well here; that the worm is healthy and does as well as in any part of the world; that in the confusion growing out of the war, the culture was neglected; and the great demand for other products arising from the French Revolution, prevented a recurrence to it.

Now, the proper time seems to have come round, to enter into this business with spirit and certain success.

The fact stated from official documents is important.

The imports for 1824 were—manufactures.

Of Silk, . . .	$7,205,334	
Of Flax, . . .	3,873,616	about half
Of Cotton, . .	8,508,248	
Of Wool, . . .	8,030,985	

It is, therefore, one of the most costly items of import: but compare it with our exports. The whole exports from the fisheries were $1,610,900, not a fourth of our imports of silk. Of lumber $1,734,586, not a fourth of our imports of silk. Of wheat flour, biscuit, corn, and Indian meal $6,713,595.

All the wheat, flour, biscuit, corn and meal exported, does not *pay* for the silk imported.

The following paragraph on the "culture of silk," is from an article in the American Magazine, published in Philadelphia, in Oct. 1758:

"The culture of silk has, in every part of the world, been esteemed a curious and a profitable employment. *Persia* or *China* does not seem to be better fitted for this important branch of trade, than are these *American* colonies. Mulberries grow spontaneously and may be easily propagated. Worms agree well with the climate, and make the best silk. The whole time of attention to complete the silk making, does not exceed six or seven weeks. Two or more acres, planted in due order with mulberries, is sufficient to feed as many worms, as will spin forty or fifty pounds worth of silk. And boys or girls are sufficient to gather the leaves. 'Tis a wonder that this useful manufacture is so universally neglected. He that would properly understand it should consult *Pullein.*" [*Village Record.*

LADIES' DEPARTMENT.

KEEPING GRAPES.

To the Editor,

I observe in the Farmer of the 16th ult. some directions for preserving grapes for several months after they are taken from the vine, by merely hanging the bunches on a string in the room. In France they are so kept with ease until mid-winter: but there is one circumstance not stated in the directions in the Farmer, which is there considered absolutely necessary to be attended to; namely, to suspend them by the small end of the bunch, so that they may hang in a reversed situation to that when on the vine.

I cannot vouch for the truth of this remark from my own observation—but I have heard it so often mentioned as a well known fact, that I can hardly doubt its correctness.

W. H.

RUDIMENTS OF COOKERY.

BROTHS AND SOUPS.

The cook must pay continual attention to the condition of her stewpans* and soup-kettles, &c. which should be examined every time they are used. The prudent housewife will carefully examine the condition of them herself at least once a month. Their covers also must be kept perfectly clean and well tinned, and the stewpans not only on the inside, but about a couple of inches on the outside: many mischiefs arise from their getting out of repair, and if not *kept nicely tinned*, all your good work will be in vain—the broths and soup will look green and dirty, taste bitter and poisonous, and will be spoiled both for the eye and palate, and your credit will be lost.

The health, and even life of the family depends upon this; and the cook may be sure, her employers had rather pay the tinman's bill than the doctor's; therefore, attention to this cannot fail to engage the regard of the mistress, between whom and the cook it will be my utmost endeavour to promote perfect harmony.

If a servant has the misfortune to *scorch* or *blister* the tinning of her pan,† which will happen sometimes to the most careful cook, I advise her, by all means, immediately to acquaint her employers, who will thank her for candidly mentioning such an accident; and censure her deservedly if she conceal it.

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* We prefer the form of a stewpan to the soup-pot—the former is more convenient to skim; the most useful size is 12 inches diameter by 6 inches deep: this we would have of silver, or iron, or copper lined (not plated,) with silver.

† This may be always avoided by browning your meat in the frying-pan; it is the browning of the meat that destroys the stewpan.

Take care to be properly provided with sieves and tammy cloths, spoons, and ladles—make it *a rule without an exception,* never to use them till they are well cleaned and thoroughly dried; nor any stewpans, &c. without first washing them out with boiling water, and rubbing them well with a dry cloth and a little bran, to clean them from grease, sand, &c. or any bad smell they may have got since they were last used: never neglect this.

Though we do not suppose our cook to be such a naughty slut, as to wilfully neglect her broth pots, &c. yet we may recommend her to wash them immediately, and take care they are thoroughly dried before the fire, before they are put by, and to keep them in a dry place, for damp will rust and destroy them very soon: attend to this the first moment you can spare after the dinner is sent up. Never put by any soup, gravy, &c. in a metal utensil; in which, never keep any thing longer than is absolutely necessary for the purposes of cookery; the acid, vegetables, and fat, &c. employed in making them are capable of dissolving them; therefore stone or earthen vessels should be used for this purpose.

Stewpans and soup-pots, with thick and round bottoms, (such as saucepans are made with,) will wear twice as long, and are cleaned with half the trouble, as those whose sides are soldered to the bottom, of which sand and grease get into the joined part, and it is next to an impossibility to dislodge it. The editor claims the credit of having first suggested the importance of this construction of these utensils.

Take care that the *lids* fit as close as possible, that the broth, soup, and sauces, &c. may not waste by evaporation. They are good for nothing, unless they fit tight enough to keep the steam in and the smoke out.

Stewpans and saucepans should be always bright on the upper rim where the fire does not burn them: but to scour them all over, is not only giving the cook needless trouble, but wearing out the vessels.

Cultivate habits of regularity and cleanliness, &c. in all your business, which you will then get through easily and comfortably. I do not mean the restless spirit of *Molidusta,* "the *tidy-one,*" who is always frisking about, in a whirlpool of bustle and confusion; and is always dirty, under pretence of being always cleaning.

Lean juicy beef, mutton, or veal, form the basis of broth: procure those pieces which afford the most and the richest succulence, and as fresh killed as possible.[*]

Stale meat will make your broth grouty and bad tasted, and *fat meat* is only wasted. This only applies to those broths which are required to be perfectly clear: we shall show hereafter, that *fat and clarified drippings* may be so combined with vegetable mucilage, as to afford, at the small cost of *one penny per quart,* a nourishing and palatable soup, fully adequate to satisfy appetite, and support strength. This will open a new source to those benevolent housekeepers, who are disposed to relieve the poor, and show the industrious classes how much they have it in their power to assist themselves, and rescue them from being objects of charity dependent on the precarious bounty of others, by teaching them how to obtain a cheap, abundant, salubrious, and agreeable aliment for themselves and families.

This soup has the advantage of being very easily and very soon made, with no more fuel than is necessary to warm a room—those who have not tasted it, cannot imagine what a salubrious, savoury, and satisfying meal, is produced by the judicious combination of cheap and homely ingredients.

Dr. Kitchiner's recipe to make a gallon of Barley Broth for a groat.

Put four ounces of Scotch barley (previously washed in cold water,) and four ounces of sliced onions, into five quarts of water; boil gently for one hour, and pour it into a pan; then put into the saucepan from one to two ounces of clean beef or mutton drippings, or melted suet; or two or three ounces of fat bacon minced; when melted, stir into it four ounces of oat meal rub these together till you make a paste, (if this be properly managed, the whole of the fat will combine with the barley broth, and not a particle appear on the surface to offend the most delicate stomach,) now add the barley broth, at first a spoonful at a time, then the rest by degrees, stirring it well together till it boils. To season it, put a drachm of finely powdered celery or cress seed, (or half a drachm of each,) and a quarter of a drachm of finely pounded cayenne, or a drachm and a half of ground black pepper, or alspice, into a teacup, and mix it up with a little of the soup, and then pour it into the rest; stir it thoroughly together, let it simmer gently a quarter of an hour longer, season it with salt, and it is ready.

The flavour may be varied by doubling the portion of onions. or adding a clove of garlic or eschallot, and leaving out the celery seed.

Knuckle of Veal, or shin or leg of Beef Soup.

A knuckle of veal, of six pounds weight, will make a large tureen of excellent soup, and is thus easily prepared: Cut half a pound of bacon into slices about half an inch thick, lay it at the bottom of a soup kettle, or deep stewpan, and on this place the knuckle of veal, having first chopped the bone in two or three places—furnish it with two carrots, two turnips, a head of celery, two large onions, with two or three cloves stuck in one of them, a dozen of corns of black, and the same of Jamaica pepper, and a good bundle of lemon-thyme, winter savory, and parsley. Just cover the meat with cold water, and set it over a quick fire till it boils; having skimmed it well, remove your soup kettle to the side of the fire, let it stew very gently till it is quite tender, *i. e.* about four hours; then take out the bacon and veal, strain the soup, and set it by in a cool place till you want it, when you must take off the fat from the surface of your liquor, and decant it (keeping back the settlings at the bottom,) into a clean pan.

If you like a *thickened soup,* put three tablespoonsful of the fat you have taken off the soup, into a small stewpan, and mix it with four tablespoonsful of flour, pour a ladleful of soup to it, and mix it with the rest by degrees, and boil it up till it is smooth.

Cut the meat and gristle of the knuckle and the bacon into mouthfuls, and put them into the soup, and let them get warm.

You may make this more savoury by adding catsup. Shin of beef may be dressed in the same way.

MISCELLANEOUS.

TIDE MILLS.

[The subject of the following letter is one of great and increasing concern to the agricultural community. The dryness of the seasons for some years past, combining with the effect of extended clearing and cultivation of the uplands and water courses, has had the effect of exhausting for a great portion of the year, if not altogether, streams that were formerly of great volume and unfailing constancy. So great is the change in the circumstances of the country in this important particular, that it has nearly become a matter of great difficulty, in many parts of the country, to get grain ground during half the year. If then the tide waters where they flow into small creeks, can be made to subserve the purpose of grinding, as has been shewn by Mr. Hambleton, a very serious embarrassment and inconvenience will have been overcome. Such creeks, convertible to this valuable end, may we suppose be found along all our river shores, where the tide ebbs and flows. A more minute description of the manner of erecting such mills, with the cost, &c. and the time they will run, and work they can do, &c. is desirable.]

Dear Sir, *Easton, Sept. 22, 1825.*

Colonel John Tilghman, of Melville, and myself, have lately erected on Miles river, near St. Michael's, a tide mill, now in successful operation, on a plan entirely new, (at least in this part of the country.) The machinery is the same as that of other mills. but the new principle consists in commanding the waters of creeks that have small mouths or inlets, by drawing across said inlets. The mill may be placed on either side the mouth of the creek deemed most convenient. A stout framed wheel and waste water race is erected, and substantially planked, with a flood-gate to each, which is closed at low water, when the tide rises, until you have a rise of 5 or 6 inches on the outer or river side. The flood-gate is raised, and the water thrown with great force and velocity on the wheel and paddles, (which resemble those of a steamboat.) If the creek has much extent of surface, say from 15 to 20 acres, the rush of the water through the wheel race fills the creek so slow, that the rise on the river side is continually increasing, and consequently the force and velocity of the water. The creek we have contains perhaps 25 acres, and we are obliged frequently to raise the waste water gate, to admit into the creek, or let off into the river, the surplus water. When the flood tide is done, and the creek filled with water, the aforesaid gates are closed until a rise is acquired, the wheel gate is then raised, and the water rushes to the river with the same force it entered the creek. We have a pair of stones separately geared for each tide. Captain Robert Speden, an ingenious and respectable mechanic of this county, is the inventor or discoverer of the above plan, and has erected and put our mill into operation. He has obtained a patent, and will contract either for the right of building, or will erect them himself, on reasonable terms. In a level district of country like this, where sites for water mills on streams are very rare, and where creeks, such as I have described, are to be found in every neighbourhood, this promises to be a useful discovery. Should you think the above notice would interest any of your numerous subscribers, you are at liberty to publish it.

I am, sir,
Very respectfully, your obdt. servt,
EDW. N. HAMBLETON.

[From the Annals of Sporting.]

STRANGE AFFINITY.

Thomas Graham, of Scattergate, Appleby, Westmoreland county, Eng. has at this time a cow and a pig so strongly attached to each other, that they are never separated; the former will not suffer herself to be driven to any place without the company of her little attendant, to whom she acts as a careful safeguard; for, in her way to grass, she has every day to pass through the town, when the grunter is frequently assailed by dogs, who pay dear for their temerity in attacking it. After a conflict of this kind, the cow and the pig never fail to congratulate each other on their victory, by stopping and rubbing their noses together in the most loving manner; and when they again begin their march, the pig will take its post close by the side of its protector, wagging its short tail with the greatest contentment.

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[*] In general, it has been considered the best economy to use the cheapest and most inferior meats for soup, &c. and to boil it down till it is entirely destroyed, and hardly worth putting in the hog-tub. This is a false frugality; buy *good pieces of meat,* and only stew them till they are done enough to be eaten.

CURIOUS FACT IN NATURAL HISTORY.

There are in a pond, near Feversham, Kent, Eng. three trout, so domesticated, as to come at the call of the person who feeds them, and actually to leap from their native element to eat out of the hand of their feeder.

CROSS-BOW EXERCISE.

In consequence of a trifling wager, the following circumstance took place, which certainly rivals the celebrated feat of William Tell. In a yard, within a short distance of our office, (says the Liverpool Mercury,) a professional gentleman, of this town, stood with a tumbler on his bare head, and with his face towards another individual, a tradesman, who, at the distance of twelve yards, discharged a bullet from a cross-bow at the glass, and broke it to atoms, without injuring, in the slightest degree, the mortal target which bore it. Our readers may depend on the truth of this statement: but we know not whether they will admire most—the skill of the one party, the nerve of the other, or be led to lament the folly of both.

LARK AND HAWK.

It may be questioned whether the human mind could have shewn more sagacity than is exhibited in the following case of instinct in a bird:—As a gentleman was travelling on horseback, a short time since, in the west of Norfolk, a lark dropped on the pommel of the saddle, and, spreading its wings in a submissive manner, cowered close to him; he stopped his horse, and sat for some time in astonishment, looking at the bird, which he supposed to be wounded, but endeavouring to take it, it crept round him and placed itself behind; turning himself on the saddle to observe it, it dropped between the legs of the horse and remained immoveable: it then struck him that the poor thing was pursued, and, as the last resource, hazarded its safety with him, when looking up, a hawk was perceived hovering directly over them; the poor bird again mounted the saddle, under the eye of its protector; the disappointed hawk shifted its station, and the little fugitive, watching its opportunity, darted over the hedge, and was hid in an instant.

SHARK.

A large shark was observed last week off Calshot castle, by Mr. Bailey, master of the Canteen there, who was in his boat at the time. He instantly rowed on shore, and having procured a musket, with some ball-cartridges, again put off to the spot. The monster darted with great velocity towards the boat, when Mr. B. discharged the piece, within a yard of the fish. On receiving the fire, it went off, but almost instantly returned, and with his tremendous jaws wide open, attacked the boat, and received a second shot, near the shoulders, which caused it a second time to disappear, but it came up again in about seven or eight minutes, to all appearance in a distressed state. The effect of the first shot was visible on its belly, it having gone quite through, and the blood discolored the water. On a third shot being fired, it went down, and was seen no more. It is conjectured that the fish was from 14 to 16 feet in length.

ANIMAL PHENOMENON.

A very singular circumstance occurred this month at the Chemical tavern, Sir Thomas's Buildings, Liverpool. An inmate of the house, whilst eating a boiled egg, perceived something hard within, which, upon examination, was found to be *another egg*, perfectly formed, three-quarters of an inch in length. The egg in which it was enclosed was perfectly sweet.

LARGE PEAR.

Mr. Joseph Hall, gardener, residing in the suburbs of Albany, has gathered from one of his trees, an enormous pear, which measures fourteen inches in circumference, and which is supposed to exceed any thing of the kind ever before seen in Europe, or America. [*Albany paper.*

England, Fifty Years Ago.

In seventy years the people of Great Britain have advanced full eight millions. In twenty-five years the number of houses in England and Wales alone have advanced one-half. Fifty years ago, the very existence of canals was matter of incredulity. Fifteen millions of public wealth have now been profitably absorbed by these mighty ducts; and at least half as much more is at this hour destined for their formation. Fifty years ago there was hardly a steam engine in the kingdom. There cannot now be less than twelve thousand; a creation of power equal to at least a quarter of a million of horses; an energy which, in a single day, would have raised up the great pyramid of Egypt. Fifty years ago our annual export of manufactured cotton did not amount to a quarter of a million in value. It has now swollen to near thirty millions. In the same period, our exported woollens, in defiance of Saxon, Prussian, Spanish, and American competition, have advanced more than two millions. Fifty years ago, our imports of raw silk were only three hundred thousand pounds in weight. They are now nearly thirty millions. Fifty years ago, our exports of linens were about four millions of yards; they are now nearly forty millions. Fifty years ago, the whole value of our exported produce, both native and foreign, was just fifteen millions of money; the value of British produce exported alone, is now more than fifty millions. A hundred and fifty years ago, says old Tucker, there were only two or three vessels in Scotland above two hundred tons; our whole tonnage is now more than a quarter of a million, employing twenty thousand souls. A hundred and fifty years ago, says Chalmers, the whole navy of Britain did not amount to a hundred thousand tons; it is now at least three millions of tons, employing about two hundred thousand souls.

[*Edinburgh Observer.*

SPORTING OLIO.

Long Island Races.

Tuesday, Oct. 4, 1825.

According to previous notice, says the Gazette, there were three match races yesterday, on the Union course, L. I. The first, at 9 o'clock, between a Bussorah, of three years, and a filly, mile heats, was won by the latter with ease, in two heats.

The great match between the north and south, in which Mr. Lynch's filly Ariel, three years old, and Dr. Wynche's colt Lafayette, of the same age, were competitors, took place at 12, the heats, as in the first match, being one mile. This match excited great interest; betting very heavy; long odds on the southern horse Lafayette. They started off at the tap of the drum, Lafayette getting the poles and taking the lead for a short distance. But Ariel soon convinced the knowing ones that they had made a great "*mistake,*" by running ahead and winning the heat, with but little difficulty. This excited a revolution; all then wanted to bet on the filly, as it was universally conceded that "*the grey mare is the better horse.*" The second heat was commenced with spirit, but, as the first heat, it resulted in favour of Ariel.

The third match at 2 o'clock, between Trouble, a colt of Duroc's, and Lance, sired by Eclipse, four mile heats, was a very beautiful race; the horses running so close together that they might frequently have been covered by a sheet. Trouble won the two heats, beating each by only half a length. Mr. Samuel Laird, the rider of the winning horse, was universally applauded for the great skill he exhibited; indeed it was believed that the success of the race was, in a great measure, attributable to his superior riding.

This day the regular races of the Jockey Club commence. Purse $500, and four mile heats. Great sport was anticipated, as the following horses had entered:—The southern mare (Wynn's) Flirtilla, Moonshine, Oscar, and Count Piper.

[From the Annals of Sporting.]

TROTTING MATCH FOR $2333.

The match between Mr. Barnard's mare of the Arabian breed, and Captain Colston's brown horse, took place on Tuesday morning, June 18, over a two miles circle in the Grove-park, at Rutherford, near Gerrard's Cross, Hertfordshire, Eng. It was to trot nine miles against each other, and to start at different ends of the two miles. The persons present dismounted, to give fair play to the horses, and not to cause a bustle to induce them to break from the trot.. Each did the two miles as follows:—

The Mare.	*Min.*	*Sec.*
1st two miles in	6	11
2d do. do.	6	10
3d do. do.	6	9
4th do. do.	6	10
Last mile	3	6
	27	46

The Horse.	*Min.*	*Sec.*
1st two miles in	6	9
2d do. do.	6	9
3d do. do.	6	11
4th do. do.	6	13
Last mile	3	7
	27	49

It was as fine a race as ever was seen, and both were neck and neck at the seventh mile, when the horse began to fall a little off his speed, and the mare did not require to be pushed. The race was won by several lengths at last.

PEDESTRIANISM.

Mr. Bernard West started, at 12 o'clock, on Monday night, the 30th of September, to go from Kensington to Maidenhead-bridge and back, 48 miles, in seven hours, for a stake of 200 guineas. Betting was 6 and 7 to 4 on time. The pedestrian did eight miles in the first hour, eight and a half in the second, and halted at Slough, having performed nineteen miles in two hours and thirteen minutes. He reached Maidenhead-bridge in three hours and eighteen minutes, fresh. On his return he travelled at the rate of seven miles an hour, and halted at Brentford, having the last five miles to do in forty minutes. He won the match with great difficulty, having three minutes to spare.

THE ONE HUNDRED STONES' MATCH.

On Monday, the 14th of October, Townsend performed an arduous task, gathering, with his mouth, one hundred stones, each stone placed at the distance of one yard; also, walking four miles backward, five forward, and running eight, making in the whole twenty-three miles, which he performed in three hours and fifty-six minutes, being four minutes under the time specified. He gathered the one hundred stones in forty-seven minutes, equal to a distance of nearly six miles.

On Monday. 14th October, William Mullan, a youth of only 15 years of age, started to walk 102 miles in 24 successive hours, on Alnwick Moor. He rested in all 51 minutes, and completed the arduous undertaking half an hour within the limited time.

Townsend, the Sussex pedestrian, completed his task, at Newcastle, 12 minutes within time. This feat may be pronounced one of the most arduous of any in the annals of walking, he having walked 500 miles *backwards* and 500 miles *forwards*, in 18 days.

RECIPES.

TO MAKE CHEAP BEER.

Pour ten gallons of boiling water upon one peck of malt in a tub; stir it about well with a stick, let it stand about half an hour, and then draw off the wort: pour ten gallons more of boiling water upon the malt, letting it remain another half hour, stirring it occasionally, then draw it off and put it to the former wort: when this is done, mix four ounces of hops with it, and boil it well; then strain the hops from it, and when the wort becomes milk-warm, put some yeast to it to make it ferment: when the fermentation is nearly over, put the liquor into a cask, and as soon as the fermentation has perfectly subsided, bung it close down—the beer is then fit for use.

A NATURAL DENTIFRICE.

The common strawberry is a natural dentifrice, and its juice, without any preparation, dissolves the tartareous incrustations on the teeth, and makes the breath sweet and agreeable.

TO CLEANSE GLOVES WITHOUT WETTING.

Lay the gloves upon a clean board, make a mixture of dried fulling-earth and powdered alum, and pass them over on each side with a common stiff brush: then sweep it off, and sprinkle them well with dry bran and whiting, and dust them well; this if they be not exceedingly greasy, will render them quite clean; but, if they are much soiled, take out the grease with crumbs of toasted bread, and powder of burnt bone: then pass them over with a woollen cloth dipped in fulling-earth or alum powder: and in this manner they can be cleaned without wetting, which frequently shrinks and spoils them.

TO PREVENT THE GROWTH OF WEEDS ROUND YOUR FRUIT TREES.

To diminish the growth of weeds round fruit trees, spread on the ground round the fresh transplanted trees, as far as the roots extend, the refuse stalks of flax, after the fibrous parts have been separated. This gives them very surprising vigour, as no weeds will grow under the refuse of flax, and the earth remains fresh and loose. Old trees treated in the same manner, when drooping in an orchard, will recover, and push out vegerian shoots. In place of flax stalks, the leaves which fall from trees in autumn may be substituted, but they must be covered with waste twigs, or any thing else that can prevent the wind from blowing them away.

A RADICAL CURE FOR THE TOOTH ACHE.

Use as a tooth powder the Spanish snuff called Sibella, and it will clean the teeth as well as any other powder, and totally prevent the tooth ache; and make a regular practice of washing behind the ears with cold water every morning; the remedy is infallible.

TO ESCAPE THE EFFECTS OF LIGHTNING.

When persons happen to be overtaken by a thunder-storm, although they may not be terrified by the lightning, yet they naturally wish for shelter from the rain which usually attends it; and, therefore, if no house be at hand, generally take refuge under the nearest tree they can find. But in doing this, they unknowingly expose themselves to a double danger; first, because their clothes being thus kept dry, their bodies are rendered more liable to injury, the lightning often passing over a body whose surface is wet; and, secondly, because a tree, or any elevated object, instead of warding off, serves to attract and conduct the lightning, which, in its passage to the ground, frequently rends the trunks or branches, and kills any person or animal who happens to be close to it at the time. Instead of seeking protection, then, by retiring under the shelter of a tree, hay-rick, pillar, wall, or hedge, the person should either pursue his way to the nearest house, or get to a part of the road or field which has no high object that can draw the lightning towards it, and remain there until the storm has subsided.

It is particularly dangerous to stand near leaden spouts, iron gates or palisadoes, at such times; metals of all kinds having so strong an attraction for lightning, as frequently to draw it out of the course which it would otherwise have taken.

When in a house, avoid sitting or standing near the window, door, or walls, during a thunder storm. The nearer a person is to the middle of a room, the better.

The greatest evil to be apprehended from lightning, is the explosion of powder-magazines. These may, in a great degree, be secured from danger by insulation, or by lining the bulk-heads, and floorings, with materials of a non-conducting nature, the expense of which would not be great.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 7, 1825.

☞ERROR.—Instead of saying, in the last number, that we would give six *volumes* of the Memoirs of the Pennsylvania Agricultural Society for five dollars, we ought to have said six *copies* of the work. There has been but one volume printed.

TO CORRESPONDENTS.

☞CURWEN, in reply to MR. THOMPSON, was received too late for insertion in this number. It will appear in our next.

Bedford, Virginia, Sept. 27, 1825.

COTTON SEED may be safely given to *hogs*, fresh in water. If not convenient to feed in water, the seed must first be considerably rotted. R. D.

TOBACCO.—Amount of inspections in the state warehouses, during the last week:

Warehouse, No. 1, ...	250 hhds.
Warehouse, No. 2, ...	248 "
Warehouse, No. 3, ...	325—823.

CONTENTS OF THIS NUMBER.

Diseases incident to Cattle in General, The Rot in Sheep, Diseases of Lambs, and Diseases of Swine, concluded—On the Hessian Fly, plan for diminishing its ravages—On Timber, opinion of First Class at West Point controverted—Product of Nankin Cotton Seed—D. J. Burr on Packing Cotton, with cuts—The Mulberry and Silk Worm—On keeping Grapes—Rudiments of Cookery, Broths and Soups—Newly invented Tide Mills—Miscellaneous Scraps—Long Island Races, Trotting Match, &c.—Recipes—Editorial—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9 50	10		
BACON, and Hams, . .	lb.	7	10	11	
COFFEE, W.I. Green, .	—	16	19	20	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	20	23		
Georgia Upland, . . .	—	16	18		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	7	10	12	15
FEATHERS, Live, . . .	—	33	35		
FISH, Herrings, Sus.	bbl.	2 62	2 75	3 00	
Shad, trimmed,	—	6			
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	5 00	5 25		
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	4 50	4 75	none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	50	57		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler, ...	—	92	1 00		
do. Red, ...	—	95	1 00		
Buckwheat, ...	—	55	75		
Rye, ...	—	55	56		
Barley, ...	—	50			
Clover Seed, Red . .	—	5 00	5 50	6 00	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25			
Oats, ...	—	30		35	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1 50			
HEMP, Russia, clean, .	ton	165	180		
HOGS' LARD, ...	lb.	10	11		
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	23	25		
MOLASSES, W. India,	gal.	34	37		50
MEAL, Corn, kiln dried,	bbl.	3 00			
NAILS, 6a20d.	lb.	6½	7	8	9
NAVAL STORES, Tar,	bbl.	2 50			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2			
OIL, Whale, common, .	gal.	27	30		
Linseed, ...	—	60	65		
PORK, Baltimore Mess,	bbl	14 50	15		
do Prime, . . .	—	11			
PLASTER, cargo price,	ton.	5 50			
POTATOES, ...	bush	75	1 00		
RICE fresh, ...	c.lb.	3 25	3 50		
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	29	31		
PEACH BRANDY, 4th pr	—	80	1 00		
APPLE BRANDY, 1st pr	--	34	35		
SUGARS, Havana White,	c.lb.	13 00	14 00		
do. Brown, . .	—	11 00	12 50		
Louisiana, ...	—	9 50	11 00		
Loaf, ...	lb.	19	22		
Lump, ...	—	16	18		
SPICES, Cloves, ...	—	80	90		
Ginger, Ground, . . .	—	7	8		
Nutmegs, ...	—	1 75			
Pepper, ...	—	17	18	25	
SALT, St. Ubes, ...	bush	40	42		
Ground Alum, ...	—	50			
SHOT, all sizes, ...	cwt.	9 50		10 00	
WINES, Madeira, L. P.	gal.	2 00	2 50	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20		
Claret, ...	doz.	3	8		
Port, first quality, . .	gal.	2 00		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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AGRICULTURE.

CURWEN'S ADVICE TO HIS FRIEND TO READ THE BEGINNING, BEFORE HE QUOTES FROM THE END.

The gentleman who has given the statement in regard to his cow, can have no cause of solicitude, as to the name of the cattle which he has sold, nor can he find any source of discontent towards his old friend Curwen, when he shall have reflected upon what *he* had written, and upon that which Curwen had given in reply. The terms Norman and Alderney cattle, are occasionally indiscriminately, but improperly used by English farmers, as well as writers. The Norman race was the breed from which the Alderneys were derived—the latter, being inferior in form, less in size, having the defects in points, and frame, which bad husbandry, and bare pastures are known to produce. In asserting, that his cow was of "*Norman*" blood, I ascribed to her, the *larger size*, and *better shape* of a race, which are not "*dwarfish*" or "*unthrifty*," which have long been known and valued in one of the finest agricultural districts of the world.

He concludes his rejoinder in No. 28, of the American Farmer, observing, "how or where Curwen "has imbibed a different opinion, and for what rea-"son published, I am at a loss to conjecture, but "hope he will now *be satisfied of his error*."

I "imbibed my opinions" upon cattle, in the only mode in which such opinions, should be received; by feeling seeing trying and examining. I had seen Normans in France—Alderneys in Great Britain during a residence of three years—and at Germantown, I have known them for seven as "*dwarfish*" and bad—their advocate acknowledging, they must be unthrifty, as he asserts, Memoirs Pennsylvania Agricultural Society, page 21. their "*carcasses, are* "*too* VALUABLE FOR BEEF."

If certain words in italics had not been introduced by Mr. Thompson, I should not have noticed his cow. I am always glad to receive instruction from those who can teach—to admit arguments which are sound, but I am not prepared to acknowledge that I am in error, until it shall have been made apparent, that I am wrong. I have not the good fortune to discover the point of my friend's argument, although I am assured, that he is honestly convinced of its force. He exclaims, "how or *where* Curwen "obtained this information, I am at a loss toconjec-"ture, for it is NEW to me:" yet he refers, to "*vol.* 3, "*page* 153," shewing, that *four years* ago, when speaking of Mr. C's importation, I emphatically remarked, "the Alderney calf, is traced with certainty "to the Island, which gives his name, but *the pedi-"gree of his family* has not been sufficiently prov-"ed, to remove our belief that they possess blood, "which *is not Alderney*. That fine farm stock may "be *shipped* from the islands in the British channel—"that well formed NORMAN cattle, have been fre-"quently so exported, is well known * * * He quotes a passage from *this same notice in the same page*, stating that "Mr. Haines' imported Alderney "bull, killed a man at Wilkesbarre, and was shot—"Captain Thompson's imported bull shewed the "same inclination, and was condemned to the yoke—"Mr. Howard's imported bull for the like disposi-"tion, is shut up for life."

Upon this discovery he exclaims, "if your *present* "*correspondent* Curwen, is the same who addressed "you vol. 3, page 153, he has *certainly changed his* "*mind*."

I wish my friend Thompson, would adhere to the old fashioned mode, *beginning at the top, instead of reading backwards from the bottom of the page*.

I have proved that in the same page, in the same *notice*, I had strongly conveyed *four years* ago, my impression, disputing the pedigree of the "*family*" of his cow. He must quote some other page, to detect a change of my mind.

I live an hundred miles from his seat. I have neither seen his bull, nor the other to which he refers, of Mr. C's blood. They were called Alderney, and *in* 1821, when the notice was published, they had not been mentioned to me, as connected, with the cow, which I had seen, and upon which my opinions were formed.

The calf of seven months, which he quotes, did not gain a premium, it did not come under the scrutiny of the judges, either as to origin or purity of blood. What man could determine, the breed of a calf *so young*, whose points of course could not have been developed, whose frame would be covered by fat, if it had been forced by nursing and all the milk of one cow, but if it had been loaded with fat, having taken the milk of two, who could determine to what breed it should be referred, with sufficient precision, to decide, that there could be no alien cross.

In support of this opinion, let it be recollected, that the bull which in 1822 when *seventeen months old* took a premium, and was then pronounced by the committee *to be not Alderney*, in 1821, when *five or six months old* had been exhibited at the Maryland Show, but was not then criticized as betraying "accidental cross in his breeding."

I must again remind Mr. Thompson, that the Normans possess all the properties, which he values in the Alderneys, and in addition better frames, good points, and larger size.

He says he was on the spot. So was I—but he further remarks, "in corroboration of this impres-"sion, one of the judges called the attention of his "associates, to examine the Alderney cow, and "pointed out to him, some striking difference in the "form, and points, with a view to shew, that the "bull was of doubtful origin."

Will any man of even less experience than Mr. Thompson assert, that because the bull shewed points, characteristic of doubtful origin, that of consequence, the cow of precisely the same blood, as the bull, must necessarily betray false breeding? Do we not often see animals, three quarters bred, having the appearance of pure blood? Do we not see the offspring of the same sire and dam, vary in the characteristics of the blood, supposed to predominate, and giving them the name of three-quarters, or seven-eighths breed? Does not every breeder of cattle, and every sportsman know, that one of the family may *appear* to be pure, and yet another may be evidently impure—that *twin lambs* and litters of puppies afford instances, which cannot be controverted?

The Norman cattle were the originals of the Alderney, which are called by Lawrence "a variety of, and smaller than the Norman." *Might not* the judge, have shewn points in the cow, directly opposed to those of the bull—observing, there is an evident difference—they are not the same in external character, yet they are the same in blood—here is one thing in the bull, there is the opposite in the cow. There are certificates at hand to shew they are of the same blood—thus they cannot be *thorough bred*, from an established race. This bull is said to be a full blooded Alderney—He is from stock imported by a gentleman, who had no motive but the desire of doing good. He was bred in Maryland—is it not just as likely, that the sagacious manager of a well conducted estate, remarkable for accuracy in all its details, superintended by a proprietor, whose success in breeding, is made apparent by the excellence of his stock, should know the pedigree of a bull bred under his own eye, as that the Governor of an Island, and a Colonel of the Royal Invalids, should know the precise origin of animals, with which it was impracticable they could have much to do. Could not a "bull jump a fence in the Alderney Island, with as much ease, as he could break into a field of a Maryland farm? As to the premium, which one of the imported bulls is said to have taken in the Island, I again remark, that Norman, and Alderney are often, though incorrectly, used as synonymous terms by unskilful persons. Do we not hear our farmers talk of the English breed of hogs, and the English breed of sheep as if there were but one breed in England? We have had in Pennsylvania a breed of cows called Hamburg, because they were shipped from Hamburg; and sheep called Irish, because they were shipped from Ireland; and various breeds called Tunisian because they had broad tails and were brought from the port called Tunis.

If one of the imported bulls, had taken a premium, how does that affect the cow? We have seen that a bull, which had been offered as Alderney, took a premium at the Maryland Show, yet he was declared by the persons who awarded it, to be *not* Alderney. They thought him "a fine animal," so fine, as to deserve a premium, and "well grown," but he was not an Alderney. Did they not think him something better?

Mr. Thompson will not admit, that the decision upon this bull, affects the cow, yet he would contend, that the decision upon the bull at the Guernsey and Alderney show, did affect the same cow.

In relation to the opinion of our lamented friend, who is no more, however much I valued him, and regarded his decision on many subjects, I am astonished at his judgment having been brought into this discussion, although he did "*board with a man in Cheltenham who kept* ONE *cow*."

I know Mr. Haines, admired the stock called Alderney in Maryland, and that he was anxious to *improve* his own by one of the bulls—but when the friend of the gentleman, with whom he had negotiated an exchange, saw the Germantown stock, raising both his hands, he exclaimed, laughing, "I would not give H——d's bull for the whole herd."

I do not wish to satisfy Mr. Thompson, that he is in "error"—during twelve years intimate acquaintance, I have been disposed to consider him generally right: I but desire to shew, to any man who is not quite sick of the subject, and will read in the ordinary way from the *beginning*, that he has not proved that I have advanced an "hypothesis," which is NEW, in ascribing to his cow better blood than he thinks she deserves, or that I had "changed my mind."

I shall not consider myself bound to prosecute this discussion, nor to rebut any argument, which may be brought either for, or against any gentleman's dead, or living cow; although I shall have no objection to discuss any matter, however tiresome or dry, with my friend Thompson at his fire side—reminding him, that it was his introduction of certain words in italics, which led me to reply.

I will positively assert, that there are *various* breeds of cattle, both in Great Britain and *America*, of which I highly approve, and I am not conscious of having opposed, the propagation of any other, than the Devon and Alderney races, although whilst breeding for *my amusement*, from "native" and imported animals of different families, my experience leads me to decide in favour of one.

CURWEN.

Philadelphia County, Oct. 5th.

HORSES, CATTLE AND SHEEP.

Comparative estimates of capital employed in rearing Horses, Cattle, and Sheep, in West Pennsylvania.

Washington, Penn. Sept. 17th, 1825.

The following estimates of profits on the various departments of husbandry, although not precisely in their present shape, were made for the use of a young friend about commencing the world as a farmer. They are the result of the most careful investigation; and, where the slightest doubt existed in my own mind, I availed myself of the judgment of the most judicious farmers in my neighbourhood.

To persons residing in the vicinity of large cities, or in districts of country where produce commands high prices, and, of course, lands sell or rent in proportion, the estimates of keeping the different kinds of stock, will appear too low; but I can assure such that the prices set down, are the very highest demanded by our best farmers. I will just state that I have at this time, near 300 sheep, kept in the best manner, at 87½ cents each, per annum.

Should you think these estimates calculated to add to the stock of useful information so widely disseminated by the American Farmer, they are at your service. B.

ESTIMATE ON HORSES.

We will suppose 12 brood mares to cost	$1200 00
Service of a horse for do.	100 00
In order to raise good colts we lose the use of the mares for two years. We must, therefore, charge the keeping of twelve mares at $15 each, per annum . . .	360 00
From twelve mares we may calculate to raise nine colts:—To keep these the first winter will cost $3 each	27 00
Their keeping second year, at $10 per head,	90 00
Do. third year at $12, do.	108 00
The fourth year, they will require a great deal of care and attention, and may be set down at $20 each	180 00
	2065 00
At the end of the first two years, we may estimate the mares at $1100; this sun must be deducted from the expenses,	1100 00
	$965 00

Some allowance ought perhaps to be made for the use of the mares that do not breed.

Nine good colts, raised with care, from such mares as could be had for $100 each, and a first rate horse, will average at four years old, $125	1125 00
Deduct expenses, as above	965 00
	160 00
Deduct from this the interest for two years, on $1200, paid for the mares	144 00
Profit	$16 00

This will appear but a poor compensation for the care and attention of four years; and when we make a proper allowance for losses by accidents, &c. the balance will be the other way. If these estimates be correct, it follows, that going extensively into the business of raising horses, will not turn out to good account. However, it is but fair to remark, that one or two good colts may be raised on a good farm, where mixed husbandry is carried on, and hardly be felt. And it is a practice but too common to make the breeding mare do almost as much work as any horse on the farm; in this way the expense is lowered, but the value of the colt is also proportionably reduced.

ESTIMATE ON CATTLE.

A good cow will raise a calf, and pay for her keeping besides; so that it will not be fair to make any charge for their keeping until they are six months old. We will take twelve as our number, and set down their keeping for the first winter, at $3 each	$36 00
Second year, pasturing and wintering at $6,	72 00
Third year, pasturing and wintering at $8,	96 00
Fourth do. do. at $8,	96 00
Add 360 bushels corn, for stall feeding, at 20 cents per bushel	72 00
Entire cost, not reckoning labour and risk,	372 00
These if good cattle and well taken care of, will average at four years old, 8 cwt. making in all 96 cwt. which with us is now worth $4 per cwt.	384 00
Profit	$12 00

Here again it would appear that raising cattle is an unprofitable branch of husbandry.

In these calculations we take it for granted, that we pasture in enclosed fields in the summer, and feed with hay during winter. However, we resort to various expedients to reduce the expense, such as feeding with straw in winter, and suffering the cattle to run in the woods during the summer. Some send their young stock to the mountains for summer pasture, which costs but little. Many of our best farmers pay but little attention to *raising* stock, but make a handsome profit by purchasing from the inhabitants of the new and thin settlements, and fattening on clover pasture and stall-feeding. This when judiciously managed, generally repays handsomely. It has also this advantage, that we bring all the bulky and unsaleable produce, consumed by these cattle, into a small compass, and into a state to command cash. It is also much better to feed as much as possible of your produce on your farm. Although you do not at first appear to have so large a profit, you are eventually compensated by the abundant supply of manure with which you are furnished.

It ought here to be noticed, that nine-tenths of our work is done by the owners of the soil, and their hardy sons, and although the profits be small, whatever they are is clear gain.

In the above estimates I did not consider it necessary to set down in detail, the quantity and value of every article consumed by the horses and cattle. The sheep estimate will supply this omission, as it shows the value of such articles.

ESTIMATE ON SHEEP.

Suppose we purchase 100 full bred ewes, at $10 each	$1000 00
Twenty-five acres of pasture, which is sufficient, can be had at $1 per acre . .	25 00
Six tons of hay, at $4 per ton	24 00
One hundred bushels of oats, at 12½ cents per bushel	12 50
A man can easily attend 500 head, and do considerable work during the summer season besides. We will, however, allow *one-fourth* of a man's time, at $150,	37 50
Shearing, salt, &c. &c.	6 00
	$1105 00
The fleeces of the above, if good, will average $2 each	200 00
From 100 ewes properly kept, we will raise 75 lambs. These at six months old, are now worth $7 each	525 00
Stock of old ewes	1000 00
	1725 00
Deduct expenses and cost, as above .	1100 00
	625 00
Deduct 20 per cent. for interest, losses, &c.	125 00
Gain, first year	$500 00

Although this profit appears large, it has been more than realized by every man amongst us, who had the fortune to possess a good flock of sheep, and took proper care of them. It would be altogether wild to calculate on the continuance of this state of things. The disproportion between sheep-husbandry and every other kind, is too great to last. Many of our farmers who heretofore scouted merino sheep, are now going into the business with spirit;—this will have a tendency to equalize. But let the best use be made of our present stock of fine wooled sheep, and it must be several years before the business can be reduced as low as the other branches of farming are now with us.

BURNED CLAY.

New Theory of the modus operandi of "burned clay" as a manure. Addressed to Ennalls Martin, M. D. by Joseph E. Muse, M. D. Cambridge.

Cambridge, March 9, 1825.

Dear Sir,—I had the honour to receive your very polite and interesting communication proposing certain problems in chemico-agriculture, for which I must express my obligations, as well for the compliment offered me by a gentleman whose acknowledged talents, erudition and profession, are peculiarly calculated to inspire confidence in his own hypotheses, as for his ardent pursuit, in the evening of an active and laborious life, of objects deeply involving the interests of the commnnity, of which he has been long a useful and conspicuous member—and I regret to suppose that they admit of no solution, *absolutely* worthy of *reliance;* they are fit and interesting subjects for inquiry and speculation, but in the present state of science, I apprehend, to say more would be to incur the charge of empiricism; with this understanding, I proceed to offer in the same frank manner in which they have been asked, my opinions and reasons upon the subject in question.

Your inquiries go to the mode and results of burning clay, and its properties as a manure, and may be referred to the following questions.

Shall the process be performed in an open or close kiln?

Is the result an oxide or a carbonate?

In what consists the operation of burned clay to promote vegetation?

What acid does a clay soil generally contain?

To determine the jndgment in regard to the first question, the condition and peculiar nature of the mass to be burned, should be carefully considered; if very barren or divested of vegetable matter, the kiln should be exposed, as freely as possible, to the atmospheric air, for reasons which will be assigned, in the course of my communication; if, on the contrary, the mass contain, as it frequently may, much extraneous inert vegetable, or other wholesome substances, capable of decomposition by fire, a close combustion will be preferable, to confine as much as possible, the volatile products, of gasses and oils, which must undoubtedly be viewed as auxiliary to the power of burned clay as a manure.

The effect upon the clay must of necessity be oxidation; and as repugnant as it may appear to be, to the new discoveries of Sir Humphrey Davy, which establish the fact that clay is a metallic oxide, (*oxide of aluminum;*) this great philosopher having converted potassium into its *deutoxide*, (dry potash) by clay, which proves the presence of oxygen in the latter, yet it is equally true that *clay is capable of supporting combustion;* this fact, (though denied by the most distinguished philosophers,) is so well known to many intelligent farmers of Europe and America, and so thoroughly established by your recent experiments, detailed in your late communication to me, that to contradict it now, to subserve the purposes of hypothesis, would be absurd. Those two facts are apparently at variance with each other, but may be reconciled by the following reflection; every metal combines with certain proportions of oxygen, and forms two or more oxides, according to its peculiar nature, or the circumstances of its application: iron, for instance, is saturated by twenty-seven of oxygen, and may remain in the bowels of the earth for ages with this, its native dose; but by exposure to a strong heat, in a crucible, this oxide, as you well know, will absorb one other proportion, so as to contain about forty-eight oxygen, which two oxides essentially differ in their affinities and other properties; and so may aluminum be oxidized to saturation in its native bed, and by an elevation of temperature and other favorable circumstances, *instar omnium* receive another proportion of oxygen, and assume new properties; and that it is capable of this second proportion, is virtually proved by an incidental statement of a fact by Dr. Darwin, in his Phitologia, viz.—"when clay is united with so much oxygen, by fire, as to form a soft brick, &c. &c."

The fact of the combustion of clay is a phenomenon for which I can offer no other solution, and Dr. Davy's new and fancifol theory of combustion, founded on the energetic exercise of the chemical forces, and dispensing with the necessity of oxygen, would not explain the phenomenon; because in the article under consideration, (clay,) we must exclude the idea of extraneous matter, and it would be absurd to suppose the alumina capable of combustion by means of an energetic chemical combination with its own corpuscles.

In regard to the question of the carbonation of the clay, I have no hesitation to say, that it is physically impossible; admitting the fullest combustion of this metallic oxide, yet it cannot result in carbon or any of its compounds, and nothing short of the mystical art of alchymy could produce it; in this, I must be distinctly understood to confine my remarks to the clay itself, not embracing all those heterogeneous substance, which may frequently be incorporated with it.

You ask, in what consists the operation of *burned clay*, to promote vegetation?

One of the most prominent and agriculturally pernicious properties of clay, is its affinity for water, with which it forms a plastic paste, that hardens and cracks with the heat of the sun, and whose strong tenacity is unfavourable to the extension of the tender radicle; this plastic property is destroyed by torrefaction; and hence manifestly arises one of the benefits of the manure in question, by interrupting the continuity of the plastic clay, and necessarily improving the texture; and applied as a top dressing, I have no doubt its operation would be conspicuous in the first year, by altering the chemical properties of the *surface* clay, which is more exposed to the influence of alternate moisture and heat, by whose agency the tenacious plasticity, and subsequent cracking is produced, whereas if ploughed in, a year's cultivation might probably be requisite for a thorough commixture, by which alone when removed from the surface it could operate effectually.

It is obviously not my intention to ascribe to this cause alone, the virtues of this manure; clay, when burned, assumes, as I have stated, a new chemical constitution, by the absorption of a second proportion of oxygen; and Dr. Darwin avers the fact, that clay, after a further oxidation by heat, has a strong affinity for nitrogen, and that the use of soft bricks in the production of nitre, is well known in Paris, where they are bought for that purpose; this nitrogen then combining with the second portion of oxygen which must have been imbibed during the combustion, the result will be nitrous acid. It is notorious that nitrous acid readily parts with its oxygen, and hence may be derived one of the benefits of burning the clay, viz: the ready and copious supply of oxygen, so essential to vegetable life, and peculiarly to the embryon plant; of which a simple experiment with dilute chloric acid will produce conviction.

This affinity for *nitrogen*, of clay when burned, is a most important fact; the process would necessarily be forwarded by the method of top dressing, in reference to immediate ploughing in, that a large surface may be exposed to the atmosphere, from which it will derive its nitrogen; yet the result will be equally certain and complete in either case.

The nitrogen, too, will combine with the hydrogen of the water, which is always present, and form ammonia; which will operate favourably upon the metallic oxides, forever prevalent in clayey soils, and incontestably pernicious to vegetation, and also upon the sulphate of clay, which is equally so, as a re-agent to decompose them, and render them, at least, harmless.

The utility of nitrogen, to vegetation, may also be deduced from the analysis of their seed, and especially those of wheat, which exhibit a large proportion of this elementary substance; and really upon an extended view of this subject, I should not be surprised, if future full and fair experiment should place this *deutoxide* of *aluminum* (as I shall henceforth denominate it,) in the first order of manures.

In answer to your last inquiry, I may say, that clays generally contain an acid. and that it is sulphuric; but they readily part with it, upon the application of strong heat; from which may be derived one of the advantages of burning them.

This leads to another chemical view of the subject, which may tend to explain the *modus operandi* of burned clay upon that which is cold and barren.

Native clays, as before stated, are *minimum* oxides; by combustion, they acquire a new state of *maximum* oxidation; the sulphuric acid which they generally discover upon analysis, they readily part with, by a strong heat; and in fact burned clay becomes a "*tertium quid*," a compound, possessing a new chemical constitution, with properties and affinities widely differing from those of the native clay: hence it follows, under the laws of complex affinities, that upon the commixture of the new compound with the old, a new set of forces begin to display themselves with more or less energy, according to circumstances; a change of temperature, and capacity for heat in the combining substances, is the necessary consequence; and ultimately, the constitution of the resulting mass is materially altered; and to this, I presume, may be referred much of the salutary effects of burned clay; *native* clay absorbs too much water for the health of vegetables, and parts with it too freely; the *burned* clay absorbs less, and retains it longer, and the compound of the two, adopts this latter character, so essential to the fertility of a soil, in a most singular degree: indicating by this fact alone, the assumption of a new chemical constitution. Widely different is the result of the commixture of sand with clay, which has been so universally recommended, to improve the texture; but I believe seldom attempted, because I presume that the labour would offer an insurmountable obstacle; the effect being *purely mechanical*. would be only in the ratio of the two earths, which the value of an American acre with the present prices of produce would not justify.

I must implore your patience for a moment longer, to remark upon the Corinthian pillar of my theory, viz: *The affinity of the maximum oxide of aluminum for the nitrogen of the atmosphere;* that beside the positive evidence of that distinguished philosopher, Dr Darwin, general reasoning and the most relevant analogies concur to sustain the fact; nature has most abundantly furnished the elements of food for vegetable as well as animal life, under various combinations; she would have been truly defective in arrangement, and foiled in her end, had she not rendered them subservient to her purposes, by means of reason and instinct in the one, and by immutable laws of matter in the other, to elicit and prepare from copious sources the food designed for organized life. An instance in point is afforded by the oxide of calcium, (lime,) in its extensive existence and constant tendency to extract from the atmosphere, and elsewhere, carbonic acid; which too is constantly regenerating, chiefly for the purposes of vegetation, by the affinity of carbon for the oxygen of the atmosphere; analagous and equally important is the character which I have ventured to assign to the oxide of aluminum, whose general existence on the broad face of nature, most aptly fits it for the wise purposes of her creation, and places in the power of man a bountiful supply of wealth and happiness.

Finally, my dear sir, I have a very strong conviction, founded on evidence and reason, of the truth of the *following propositions.*

That *burned clay* operates to promote vegetable life, both *mechanically* and *chemically.*

That the process of *combustion* should be *generally* performed with a *free access* of *open air.*

That the combustion may be in a *close* kiln, provided there be such a proportion of vegetable matter, that the *confinement* of its *volatile products* may compensate for the *defective oxidation* of the clay.

That its *tendency* to *absorb* the *nitrogen* of the atmosphere, is the most useful and prominent character of well *oxidized* clay.

That the *new constitution* of this substance is capable of *assimilating*, by commixture, the *native cold clays*, so as to *elevate* their *temperature*, to *diminish* their *avidity* for water, and *increase* their *capacity* to *retain* it—and

That *no substance* in the wide field of nature has yet been discovered, equal in *extent, accessibility,* and *fertilizing* powers, to this *deutoxide* of *aluminum.*

In attestation of these truths, I have made some chemical examinations, which I design to apply in the present year to practical uses, of which I will then render you an impartial history.

I am conscious, my dear sir, your patience must be exhausted; and equally so, that your liberality will apologize for the ardent manner in which I have treated the subject proposed to me; the earnest investigation of which, considerably promoted by your inquiries, has conducted me to a fuller conviction than I had before experienced; and for which I beg you to accept the acknowledgements of

Yours, most respectfully,

JOS. E. MUSE.

To Ennalls Martin, M. D.

[*Cambridge Chronicle.*

PALMA CHRISTI—INQUIRY.

Dear Sir, *Cambridge, Oct.* 2, 1825.

I have been so *frequently* disappointed in my wheat crops, for several years, upon land which I have expensively and highly cultivated and improved, that I have determined, if not yet, on a new series of crops, at least, to make large and satisfactory experiments the ensuing season. I have, this season, grown some cotton of different kinds, and I have concluded to plant next year about 50 acres of cotton, *green seed*, which I find to be the best adapted to our climate. I design also to plant 10 acres of Palma Christi, if I can obtain seed for so much.

In regard to the cotton, your inestimable paper has already furnished me with the mode of cultivation, satisfactorily. My present object is to request of you the favour to insert a few queries, in respect to the Palma Christi.

What is the mode of cultivation? What soil is best adapted to it? How many bushels of seed will an acre generally produce, say, upon lands capable of 20 bushels of wheat? How is the crop gathered or harvested? What price will it generally bring? How much oil will a bushel produce?

If any of your correspondents who possess information upon this subject, will be so obliging as to communicate it through the Farmer I shall esteem it a high favour, which may possibly benefit others as well as myself.

Yours, respectfully,
JOS. E. MUSE.

MEXICAN PIGGERIES.

A fine breed of that useful animal, the pig, is kept by several persons of wealth, as an article of trade, in the city of Mexico, and the care and attention paid to their cleanliness and comfort, so far exceed any thing I have seen elsewhere, that a short account may be useful, by furnishing hints to our farmers, brewers, distillers, &c. by whom large numbers of these valuable animals can be kept. The premises where the business is carried on are extensive; consisting, in general, of a good dwelling house, with a shop, slaughter-house, and places for singing the pigs, large bowls for rendering the lard, and lard rooms, with wooden binns for containing the rendered fat, which is an article of great consumption in Spanish cookery, being used as a substitute for butter. There is also a soap manufactory, in which the offal fat is manufactured, and apartments where the blood is made into a kind of black-pudding, sold to the poor. Behind all these are the styes for the hogs, generally from 800 to 1000 in number, which occupy a considerable range of well built sheds, about 30 feet deep, with the roofs descending very low; and having the entrance through low arches, before which is an open space the whole length of the yard, and about 24 feet wide, in the centre of which is a kind of aqueduct, built of stone, and filled with clean water, supplied from a well at the end of the premises. The hogs can only put their noses into this water through holes in the walls which prevents their dirtying it, as it passes through the whole division of the yard. This is the only liquid given them; and their food is maize or Indian corn, slightly moistened, and scattered at stated hours on the ground, which in the yard as well as the place where they sleep, is perfectly dry and clean.

They are attended by several Indians with every possible care, and have a cold bath on the premises, which they are frequently obliged to use, as cleanliness is considered essential to their acquiring that enormous load of fat from which their principal profit is derived. Their ease and comfort also appear to be studiously attended to; and the occupation of two Indian lads will cause a smile on the countenances of my musical readers, where they are employed from morning till night, in settling disputes, or little bickerings, that may arise among the happy inhabitants of this community, and in singing them to sleep. The boys are chosen for the strength of their lungs, and their taste and judgment in delighting the ears and lulling the senses of this amiable harmonic society: they succeed each other in chaunting during the whole day, to the great delight and edification of the audience, who seem fully to appreciate the merits of the performers. The proprietor of one of those establishments himself attended us, and explained the use of the various apartments. He assured me that the premises cost him $60,000, and that his sales amounted to about $2000 per week; indeed, his display of diamonds, and his three splendid carriages with fine horses, standing in the yard, bespoke him a man of some opulence and importance. His stock are bred at a farm belonging to him at Otumba, and driven to Mexico, to be fattened, when eight months old.

[*Bullock's Mexico.*

AGRICULTURAL EXHIBITION AND FAIR.

The "Dorchester Agricultural Society" will hold their *first Cattle Show* in Cambridge, on Thursday and Friday, the 10th and 11th of November next, for the exhibition and sale of domestic animals and family manufactures, and for ploughing matches. The following premiums will be awarded:

HORSES.

For the best stallion (draft or saddle,) .	$ 10
For the best brood mare, do. do. . . .	5

CATTLE.

For the best bull over 2 years old, . .	10
For the second best bull over 2 years old, .	5
For the best bull under 2 years, . .	5
For the second best bull under 2 years, .	3
For the best milch cow, ...	5
For the second best milch cow, . . .	3
For the best heifer, from one to three years old, with or without calf, . . .	5
For the best under one year, . . .	5
For the best yoke of broke oxen, . .	5
For the second best yoke of broke oxen, .	5
For the best and fattest bullock, . .	4

SWINE.

For the best boar, ...	5
For the second best boar, ...	3
For the best sow, ...	4
For the second best sow, ...	3
For the fattest and heaviest hog, live weight,	3

SHEEP.

For the best ram, ...	5
For the second best ram, ...	3
For the best ewe, ...	5
For the second best ewe, ...	3
For the best lot of wethers, not over two years old, and not less than four in number,	5

IMPLEMENTS OF HUSBANDRY.

For the best agricultural implement that may be considered new and worthy of patronage,	5

PLOUGHING MATCHES.

For the best ploughing by two horses, . .	6
For the second best do.	5
To each successful Ploughman, . . .	3—6

FAMILY MANUFACTURES.

For the best piece of kersey, not less than 20 yds.	4
For the best lindsey, not less than 10 yards,	4
For the best carpeting not less than 20 yards,	5
For the best hearth rug, ...	4
For the best counterpane, ...	4
For the best linen sheeting, not less than 10 yds.	4
For the best linen diaper for table cloths,	4
For the best towelling linen diaper do. .	4
For the best pair knit woollen stockings, .	3
For the best pair knit cotton stockings, .	3

BUTTER.

For the best fresh butter, not less than 5 lbs.	4
For the second best do. do. : . .	3
For the best potted butter, not less than three months old, nor less than 10 lbs. .	4
For the second best do. do.	3

CROPS.

For the best average crop of millet, or other good hay, well cured, on not less than one acre and not less than 5,000 lbs. per acre,	5
For the best average crop of Indian corn, on not less than three acres, and not less than 40 bushels per acre, . . .	5
For the best average crop of wheat, on not less than three acres, and not less than twenty bushels per acre, ...	8
For the best crop of potatoes, on not less than an acre, and not less than 250 bushels,	5
For the best crop of carrots, do. . .	5

FERMENTED LIQUORS.

For a sample of the best barrel of cider of any age, ...	4

In every instance satisfactory evidence must be exhibited as to the cultivation and product, together with samples of the crops. and a statement of the time of planting or seeding, and the quantity sowed to the acre; and no premium will be given for animals or crops unless owned in Dorchester county.

JOS. E. MUSE, *President.*
John H. Hooper, *Sec'ry.*
Cambridge, July 4, 1825.

[The rules and regulations are the same as are generally established on such occasions, and are published in the hand-bills.]

INTERNAL IMPROVEMENT.

[In this number we commence the publication of an able and lucid address to the citizens of Pennsylvania on the subject of connecting the waters of the Ohio and Lake Erie with the Susquehanna. We regret the necessity of dividing it, but that regret is diminished by the consideration that the importance of the subject, and the talent with which it has been developed, have already given it a wide spread circulation; and we publish it more for the sake of record and reference, than in the expectation of offering to many of our readers what they have not already seen. Pennsylvania has silently and unostentatiously expended immense sums in works of internal improvement, and, is at this time making great preparations to do more. She has enlisted wealth, talent and *perseverance*, before which all obstacles must yield;—so true are the homely sayings of her great Frankin, that

> "By diligence and patience the mouse ate in two the cable." and,
>
> "Little strokes fell great oaks."

As for poor Maryland, we must confess we have little hopes of her doing any thing to give artificial effect and value to her natural resources. Nature seems to have thrown in our way the means of augmenting our wealth and population, as if to test our skill and publick spirit, but the pearls have fallen before swine. We are too indolent, contracted and timid, to complete the works which God seems to have begun and commanded us to finish. He has told us to increase and multiply, yet we refuse to improve the sources that he has provided for augmenting the means of subsistence, upon which multiplication depends. But saying no more at present, we shall return to this subject with more leisure—if not in better humour.]

TO THE CITIZENS OF PENNSYLVANIA.

Friends and Fellow Citizens,

Having had the honour of being appointed by the Convention at Harrisburg, a Committee to address the citizens of the state on the subject of its internal improvement, particularly as regards opening a communication between its eastern and western waters; we solicit your attention to the facts and reasonings on this important subject, which we respectfully submit to your consideration, with a hope, that they will, with every well constituted mind, remove all doubt of the eligibility of the undertaking. on a scale worthy of the great state we inhabit—a state second to none in the Union, in point of natural advantages of every description.

In calling the attention of the citizens of Pennsylvania to the subject of this address, it is our purpose to rest our assertions upon ascertained and incontrovertible data; and we ask no confidence but that to which we shall entitle ourselves by the facts to which we shall refer. Experience is the most certain test of all human undertakings; and, therefore, to establish the utility of the improvement of the state generally, and especially of the proposed communication between its eastern and western sections, it is fortunate that we are not obliged to depend on theory, which, however plausible, is often fallacious. Internal improvements, which cheapen and facilitate the means of communication between different countries and different portions of the same country, have the testimony of the civilized world in their favour; and their effects upon the prosperity and happiness of the people of every nation in which they exist, are in full proof. We can appeal to the experience of Great Britain, of Holland,[*] of France, and of China, on the subject of canals generally, and to that of New York, in her two great canals—cases which are irresistibly convincing on this subject.

Postponing for the present, an exhibition of the benefits which will result from the completion of a communication between lake Erie and the Ohio and Susquehanna, independent of the revenue to be derived from such a work; we wish to call your attention to the progress and success of the New York grand canals, in the first instance.

The Erie canal, three hundred and fifty-three miles in length. was begun July 4, 1817, and will be completed in the course of next month. In 1821, there were 94 miles navigable—in 1822, 116—in 1823, 160—and in 1824, 280. The tolls received in 1821, were $23,000—in 1822, $57,160—in 1823, $105,037—and in 1824, $294,546; thus almost trebling in the last year, even before the completion of the work.

The Champlain Canal is sixty-one miles long. The tolls on it in 1823, were $26,966—in 1824, $46,214. The total expenditure on both canals, (exclusive of the tolls,) has been $8,829,055: to complete the works and pay damages, will require $800,000 more—making the sum actually raised and to be raised $9,629,055. Add the tolls, which have been appropriated to aid the canal fund, and it will somewhat exceed $10,000,000, for the most extensive inland artificial navigation in the world, 414 miles. The total tolls on both canals last year, were $340,761, being within $62,042 of the whole present interest on the canal debt, which is only $402,803. The tolls of the year 1825, are expected to exceed $500,000. In May, they were about $100,000, and nearly as much in June. The best informed citizens of the state, calculate that in a very few years the revenue of the canals will amount to a million of dollars annually, and not only ultimately pay off the debt, but support the government. And let it be observed, that all the calculations heretofore made on the subject, have fallen short of the reality. The annual expenditure for repairs, improvements, and superintendance, is calculated at $100,000.

We trust that these favourable results would, in themselves, be abundantly sufficient to settle the question. But there are other points far more important in the eye of a statesman Facility of access to market, affords such a stimulus to industry, as, in many cases, by enhancing the price of produce, not merely to increase the value, but even to double and quadruple the quantity. "Lands too remote from market to tempt cultivation—forests hitherto regarded as inaccessible—beds of minerals or fossils unknown or neglected, will be brought within the reach of ordinary enterprise, and rendered subservient to the convenience and comfort of the citizens, or to the defence and safety of the state."

"The improvements in the neighbourhood of the Erie canal, are subjects of wonder and delight. Swamps have been cleared—marshes drained—and cultivation extended where human footsteps had never trod." On its banks, petty hamlets have become handsome villages—villages have become towns—and towns and villages are springing up, where, a few years since, there was no trace of a human habitation. Rochester, the chief town in Monroe county, by the census of 1820, contained 2,062 inhabitants; by one held in 1825, 3,731; and probably contains at present 4,500. In 1812, there was not the semblance of a village there.

A lot of eleven feet front and forty feet deep, has been recently sold in that town for $1100—and a brick building erected on it, which rents for 340 dollars per annum.

The town of Lyons, which, five years ago, contained but two buildings, has now a court-house, three places of worship, six inns, ten stores, and between 900 and 1000 inhabitants.

At the town of Palmyra, 360 miles from New York, there were 1500 cattle slaughtered in 1824. At the close of the present year there will have been 3000.

The New York ship builders are at present supplied with timber from Rochester and other places on the canal. The tolls paid on two rafts, from Rochester to Albany, amounted to 367 dollars.

It is stated, on respectable authority, that the increased value of produce in the single county of Monroe, in the state of New York, in the year 1823, resulting wholly from the completion of the canal to that quarter, amounted to no less than $275,000. (See note A.)

Ten thousand boats passed at the junction of the two canals in 1824. The attendants are employed day and night, and pass above forty in twenty-four hours; nevertheless, there are always from sixty to seventy waiting. A second canal from Albany to Schenectady has become necessary, and will probably be undertaken at no very distant day.

The value of the produce received at Albany last year, through both canals, was about $3,000,000—and the quantity of merchandize probably an equal amount.

In the year 1821, there were but ten boats on the Champlain canal. The number was increased to above one hundred in 1823.

Among the advantages resulting from the Erie and Champlain canals, has been the expenditure of about 9 or $10,000,000 among the farmers and other citizens of the state. Intense distress had prevailed in those quarters of the country for two or three years before the canals were commenced. The farmers were deeply in debt for their lands, and greatly embarrassed. The expenditure has completely relieved them, and produced a total change in their situation.

Another advantage, the extent of which it is difficult to calculate, is the enhancement of the value of lands. This enhancement in the state of New York, is probably beyond the whole expense of the two canals. (See note B.) Tracts of land contiguous thereto, have been recently rented for as much per acre, as they were a few years since offered for in fee simple without finding a purchaser. The advance of the value of the timber lands in the state of New Hampshire, by the completion of the Middlesex canal, is estimated by competent judges, at $5,000,000; whereas the whole expense of the canal, 31 miles long, was only 700,000 dollars. Lands rose wherever there was convenient access to them, from one and a half and two dollars, to four, six and eight dollars per acre.

In addition to these facts, we beg leave to state the very great advantages of conveyance by canal over that by even the best turnpikes: first, as regards the outfit; and secondly, as regards the expense of transportation, supposing wagons to proceed at the rate of 20 miles per day, and canal boats at the rate of 25. Some proceed at the rate of 40 and 50 miles.

The canal boats are usually calculated to contain 270 barrels of flour each, equal to about 25 tons, or an equal amount of other produce; which, conveyed on a turnpike, would require 11 wagons, and 55 horses. N. B. Some of the Erie canal boats carry 35 to 45 tons.

OUTFIT.

By Canal.		*By Turnpike.*	
Boat, about . . .	$250	11 wagons at $160,	$1760
Horse, . . .	100	55 horses at $100,	5500
Gears, : . . .	15	55 sets gears at $15,	825
	$365		$8085

Here is an extraordinary difference in the outfit; the one twenty-two fold greater than the other; and there must be a continued onerous difference, arising from the support of the horses and the wear and tear of the wagons.

The difference in the expense of transportation is not quite in the same proportion. We state the result of the transportation of 270 barrels of flour for 300 miles, by canal and by turnpike:

By Canal.		*By Turnpike.*	
Two men and one boy 12 days, 87½ cts.	$31.50	55 horses 15 days at 87½ cents each, .	$721.60
One horse 12 days, at 87½ cents, .	10.50	11 men 15 days, at 87½ cts. ea.,	144.37½
	$42.00		
But as canals generally require greater circuits than roads, we will add ⅓d, thus allowing that where a turnpike road could be made of 300 miles a canal to & from the same points would require 400 miles, ...	14.00		
	$ 56.00		$ 865.97½

In the above calculation, the boat and horse on one side, and the wagons, horses, &c. on the other, are presumed to belong to the owners of the respective freights. Supposing the freights to be transported by professed wagoners and boatmen, it would not materially vary the proportion.

We omit to notice the tolls on either side, as they are nearly equal on turnpikes and canals.

Thus, the cost of transporting a barrel of flour 400 miles, by canal, would be about twenty-one cents, exclusive of tolls—whereas, by a turnpike 300 miles, it would cost 320 cents.[*] This expense would close the market against the article, and against all bulky articles of small comparative value, at the same distance, except in very extraordinary cases.

The flour and wheat (calculating five bushels of wheat to a barrel of flour,) transported on the Erie canal last year, were 215,000 barrels. The canal, as we have stated, is 353 miles long; and supposing, for argument sake, that the average transportation of those articles was only 250 miles, the cost, at the above rate, exclusive of tolls, was about $36,000—whereas, had it been conveyed on a turnpike, (admitting the turnpike one-fourth shorter,) it would have cost above $566,000, exclusive of tolls. Thus the saving to the citizens, on the transportation of one single item, was greater than the actual interest on the entire debt contracted for the two canals.

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[*] The Dutch have recently cut a canal calculated for the largest ships of the line. It is said to be 48 miles long—although some accounts state only 35. The depth is twenty-four feet. There are two sets of locks, five of 51 feet wide and 200 long—the others, lateral ones, 18 feet wide for smaller vessels. As soon as it was opened, a frigate of 44 guns, and a large East India vessel, passed each other in it without inconvenience. They were dragged by six horses. The excavation was attended with difficulties which would have appalled any other people than the Dutch; as the canal was cut through a spongy morass, where they were obliged to extract the fluid earth by scoop nets instead of spades.

[*] This is higher than the present transportation from Pittsburg. But it must be observed, that the return freights are taken on very low terms, as otherwise the wagons would generally come down either empty or very partially loaded.

We now enter on the consideration of the expense of the contemplated work, premising that it is impossible to form a perfectly accurate estimate, as the location is not fixed. Desirous of avoiding controversy, we will allow a wide scope for the most extravagant calculation, and there cannot be a doubt that it will amply repay whatever it may cost. In order to evince the facility with which it may be effected, we will assume, that to complete a canal *from Philadelphia to Pittsburg*, an expenditure of $8,000,000 will be necessary, (but we believe it $1,500,000 too much;) that this sum will be borrowed in yearly instalments, at five per cent. interest, and that eight years will be required to complete the canal.*

Interest—First year, ...	$ 50,000
Second, ...	100,000
Third, ...	150,000
Fourth, ...	200,000
Fifth, ...	250,000
Sixth, ...	300,000
Seventh, ...	350,000
Eighth, ...	400,000
	$ 1,800,000

This, supposing no tolls were to be collected till the work were completed, is the whole sum to be raised in a state embracing 46,000 square miles, or 29,440,000 acres, with a population of 1,250,000 people, which will probably amount to 1,750,000 before the canal is finished--a state, of which the assessment of real property in 1815, amounted to $346,633,389, and which, without material inconvenience or pressure, paid for internal duties in that year, no less than $1,087,057. That any insuperable difficulty, or indeed any difficulty worthy of serious attention, could occur in raising the small sums necessary to pay the above interest in so powerful a state, wholly free from state taxes, will never be admitted by any rational mind. If the cost were double, the object is amply worth the sacrifice.

But the experience of the Erie canal satisfactorily proves that there will be a considerable income from our canal, not very long after its commencement. Take what direction it may, it will pass through regions abounding with coal and iron, and of course cannot fail to be very productive at an early stage of the operations on it. It is therefore probable that the only sums to be raised for paying the interest, will be in the four first years—as the tolls of the remaining four can scarcely fail to be amply adequate for that purpose. But suppose the tolls not to be sufficient until the commencement of the sixth year, the whole sum necessary to be raised, would be only be $750,000 in five years, a sum which the smallest state in the Union could readily raise by a proper system; and there cannot be a doubt, that within a few years after its completion, the income will not only afford means of establishing a sinking fund to pay off the debt, but revenue sufficient to support our state government, and free our citizens from the burden of taxation.

The influence of the proposed improvement on the sources from which the state derives its revenue, cannot but be immense. As the demand for merchandize increases, the auction duties will augment; as the retail sales of foreign articles increase, the number of licenses will be greater; as intercourse throughout the state becomes more extensive, and as Pennsylvania shall become, as she will by means of the connexion between the western states and the Atlantic markets, being made through her centre, a thoroughfare for the citizens of those fertile regions, her receipts from tavern licenses will be multiplied many fold.

It may be asserted with confidence, that the resources of the commonwealth from auction duties; from retail licenses, and from tavern licenses, will, before the work shall be completed, be twice their present amount, and will afterwards increase to three times the same.

In addition to these resources, let it be observed, that when we give the farmer of the interior a cheap and easy access to market, he will be enabled to pay the commonwealth for his unpatented lands; and thus, from this source alone, more than 2 millions of dollars, a sum greater than all that will be required to pay the interest of the debt which may be created to make the desired improvement, will be poured into the treasury, without oppression or inconvenience to the debtors.

It is asserted that the debt which must be contracted for this purpose cannot be paid off; that it will remain a burden on our posterity; and on this ground some opposition has been excited against the undertaking. It might be easily proved, that even if these positions were true, the benefits which would certainly flow from the work, would more than repay the expenditure for its execution. How many state undertakings, by their influence on the wealth, the industry, and the happiness of our citizens, have fully compensated the commonwealth for their cost, although they bring nothing into its coffers? Are the advantages of our turnpikes, and of our bridges, to be estimated by the revenue they produce? Should they, by some unexpected cause, be at once destroyed, would not the citizens of the state, if necessary, willingly expend twice their cost to restore them? It is not by the amount of revenue alone that the value of such works should be estimated. The farmer finds his possessions enhanced three-fold--industry finds a demand and a market for its productions by their facilitating intercourse: and yet but little pecuniary gain is derived by those who have created these benefits, or by the state, for the capital invested in the works by which they have been accomplished. Such have been the effects of turnpikes in Pennsylvania, and how much greater would be the effects of canals? Supposing for a moment, that the tolls were reduced so low, as to produce nothing more than the interest of the loans, and pay for attendance and repairs; the canal would, even at that low estimate, be abundantly worth the cost, independent of the numerous advantages which it must secure. It will be an invaluable bequest, which will entitle the legislature to which it shall owe its existence, to the lasting gratitude of posterity. But we are prepared by incontrovertible evidence to establish the fact, that the direct revenues which Pennsylvania will derive from the proposed work, will be far beyond the interest of any expenditure it will require; and we beg leave to repeat, it cannot be too often repeated, that they will not only repay in a few years all its cost, but become fruitful and ample means to support her government, without taxation, and to enable her to carry into every part of her territories, the same means of prosperity and wealth.

(Note A.)

Statement showing the amount of profits to the county of Monroe, New York, arising from canal navigation, during the year ending Nov. 1823, extracted from a report of the Ohio Canal Commissioners.

"494,000 bushels of wheat were manufactured at the Rochester mills during the year, which, previous to the completion of the Erie canal to that place, was worth but 50 cents per bushel, ...	$ 247,000	
Average value of wheat at Rochester, in 1823, 94 cents per bushel, ...	464,360	
		217,360
20,000 tons of merchandise brought up, at a saving, in consequence of canal navigation, of $24 per ton, ...		48,000
Property not marketable heretofore, viz. staves, heading, tanner's bark, plaster, rails, posts, &c.		10,000
Total, ... :		$ 275,360

(Note B.)

We submit the following estimate from Mr. Clarke's report on the Juniata Canal, as to the enhancement of the value of lands by the completion of the canal to Pittsburg. That it is too highly coloured and flattering, we admit; but reducing it one half, three-fourths, or even seven-eighths, which we believe a far greater reduction than is necessary, it fully proves that this one item alone would warrant the expense of the canal, independent of its other numerous and important advantages.

"Let us suppose five concentric circles, the innermost of which to pass round Pittsburg at thirty miles distance, and having the lands within it raised in value only $2.50 per acre, and each succeeding circle at the same distance from the one within it, having a less increase on the value of its lands by fifty cents per acre, which would leave the outermost circle within the supposed influence of the canal, only benefited at the rate of fifty cents per acre. The calculation would then stand thus:

Circles.	*Square miles.*	*No. of Acres.*	*Enhanced value per acre.*	*Dollars.*
1st,	21,721½	13.901,760	$0 50	6,950,880
2d,	18,894½	12,092,480	1 00	12,092,480
3d,	16,067½	10,283,200	1 50	15,424,800
4th,	13,240½	8,473,920	2 00	16,947,840
5th,	10,413½	6,664,640	2 50	16,661,600
	10,337½	51,416,000		$ 68,077,600

(*To be continued.*)

LADIES' DEPARTMENT.

ANEMONE.

RANUNCULACEÆ.—POLYANDRIA POLYGYNIA.

Anemone, from the Greek anemos, wind: some say because the flower opens only when the wind blows; others, because it grows in situations much exposed to the wind.—*French*, Anemone, l'herbe au vent [wind herb.]

To do justice to every species of the anemone, it would be necessary to write a volume upon that subject alone; but it will suffice for the present purpose to speak of the kinds most desirable.

The anemones are natives of the East, from whence their roots were originally brought; but they have been so much improved by culture, as to take a high rank among the ornaments of our gardens in the spring. As they do not blow the first year, it will be more convenient to purchase the plants from a nursery than to rear them at home: on another account also, it will be better; for they vary so much that it is impossible to secure the handsomest kinds by the seed; and, when in flower, they may be selected according to the taste of the purchaser. They should be sheltered from frost and heavy rains: light showers will refresh them, and in dry weather they should be watered every evening, but very gently. When the roots are once obtained, they may be increased by parting.

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* If wooden locks be used—(and there are strong arguments in their favour, as they last 14 or 15 years†—cost but about 125 dollars per foot, instead of 1000—and can be repaired in winter, which stone locks cannot be,) the cost would not probably be more than $4,000,000 *from the Susquehanna to the Alleghany*, which is all that is necessary to provide for in the first instance—as the connexion between the former river and Philadelphia will be open long before the western part of the route is prepared But we proceed on the supposition of an expenditure of $8,000,000.

† There is reason to believe that timber well saturated with lime water, would last from twenty to thirty years in locks.

The narrow-leaved garden anemone, grows wild in the Levant. In the islands of the Archipelago the borders of the fields are covered with it in almost every variety of colour; but these are single; culture has made them double.

Of the double varieties of this species there are nearly two hundred. To be a fine one, a double anemone should have a strong upright stem, about nine inches high; the flower should be from two to three inches in diameter; the outer petals should be firm, horizontal, unless they turn up a little at the end, and the smaller petals within these, should lie gracefully one over the other. The plain colours should be brilliant, the variegated clear and distinct.

The broad-leaved garden anemone is found wild with single flowers, in Germany, Italy, and Provence —the single varieties are sometimes called star-anemones: they are very numerous, as are also the double varieties, of which the most remarkable are the great double anemone of Constantinople, or Spanish marigold, the great double orange tawny, the double anemone of Cyprus, and the double Persian anemone.

There is a species called the wood-anemone, which grows in the woods and hedges in most parts of Europe. In March, April, and May, many of our woods are almost covered with these flowers, which expand in clear weather, and look towards the sun; but in the evening, and in wet weather, close and droop their heads. When the wood-anemone becomes double, it is cultivated by the gardeners; and were the same pains taken with this as with the foreign anemones, it would probably become valuable.

Anemone roots may be planted towards the end of September, and again a month later; some plant a third set about christmas. The first planted will begin to flower early in April, and continue for three or four weeks; the others will follow in succession. As soon as the leaves decay, which of those first planted will be in June, the roots should be taken up, the decayed parts and the earth cleared away; and having been dried in the shade, they should be put in some secure place, where they may be perfectly dry, and particularly where mice, &c. cannot find access to them. This opportunity may be taken to part the roots for increase; and provided each part has a good eye or bud, it will grow and flower; but they will not flower so strong if parted small. The roots will be weakened if suffered to remain long in the earth after the leaves decay. They will keep out of the earth for two, or even three years, and grow when planted. The single, or poppy anemone, will, in mild seasons, blow throughout the winter.

Earth proper for the anemone may be procured from a nursery; the roots may be planted in pots five inches wide; the earth an inch and a half deep over the top of the roots, and the eye of the root upwards. They must be kept moderately moist, shaded from the noon-day sun, and exposed to that of the morning. In the winter they should be placed under shelter, but should have plenty of fresh air, when not frosty.

The Abbē la Pluche relates a curious anecdote of M. Bachelier, a Parisian florist, who, having imported some very beautiful species of the anemone from the East Indies to Paris, kept them to himself in so miserly a manner, that for ten successive years he never would give to any friend or relation whomsoever the least fibre of a double anemone, or the root of one single one. A counsellor of the parliament, vexed to see one man hoard up for himself a benefit which nature intended to be common to all, paid him a visit at his country-house; and, in walking round the garden, when he came to a bed of his anemones, which were at that time in seed, artfully let his robe fall upon them; by which device he swept off a considerable number of the little grains which stuck fast to it. His servant, whom he had purposely instructed, dexterously wrapped them up in a moment, without exciting any attention. The counsellor, a short time after, communicated to his friends the success of his project; and by their participation of his innocent theft the flower became generally known.

Rapin, in his poem on gardens, ascribes the birth of the anemone to the jealousy of Flora; who fearing that the incomparable beauty of a Grecian nymph would win from her the love of her husband Zephyr, transformed her into this flower. But to this tale he adds an account better authorized, of the anemone having sprung from the blood of Adonis and the tears of Venus shed over his body; and and it is but common justice to Flora to observe that this is the generally received opinion of the origin of the anemone. Cowley gives it this parentage in his poem on plants. Ovid describes Venus lamenting over the bleeding body of her lover, whose memory and her own grief she resolves to perpetuate by changing his blood to a flower; but less poetically than some others, he substitutes nectar for the tears of Venus; not even hinting that the said nectar was the tears of the goddess.

> "But be thy blood a flower. Had Proserpine
> The power to change a nymph to mint?—Is mine
> Inferior? or will any envy me
> For such a change? Thus having utter'd, she
> Pour'd nectar on it, of a fragrant smell;
> Sprinkled therewith, the blond began to swell,
> Like shining bubbles that from drops ascend;
> And ere an hour was fully at an end,
> From thence a flower, alike in colour, rose,
> Such as those trees produce, whose fruits enclose
> Within the limber rind their purple grains;
> And yet the beauty but awhile remains;
> For those light-hanging leaves, infirmly placed,
> The winds, that blow on all things, quickly blast."
>
> SANDYS' OVID, book x.

The Greek poet, Bion, in his epitaph on Adonis, makes the anemone the offspring of the goddess' tears.

Mr. Hor. Smith, in his poem of Amarynthus, supports the first reason for naming this flower the wind-flower—that it never opens but when the wind blows:

> "And then I gather'd rushes, and began
> To weave a garland for you, intertwined
> With violets, hepaticas, primroses,
> And coy anemone, that ne'er uncloses
> Her lips until they're blown on by the wind."
>
> AMARYNTHUS, p. 46.

It seems more usual, as well as in character, for the presence of the sun to unclose the lips of the anemone, which commonly close when he withdraws; but when he shines clear,

> "Then thickly strewn in woodland bowers,
> Anemones their stars unfold."

Sir W. Jones has translated an ode from the Turkish of Mesihi, in which the author celebrates several of the more sweet or splendid flowers:

> "See! yon anemones their leaves unfold,
> With rubies flaming, and with living gold"

"The sweetness of the bower has made the air so fragrant, that the dew, before it falls, is changed into rose-water."

> "The dew-drops, sweeten'd by the musky gale,
> Are chang'd to essence ere they reach the dale."

The only poetical allusion, which I have met with, to the fragility of the anemone, is in the poems of Sir W. Jones:

> "Youth, like a thin anemone, displays
> His silken leaf, and in a morn decays."

SPORTING OLIO.

LONG ISLAND RACES.

Wednesday, Oct. 5, 1825.

THE purse of $500 was taken yesterday by the Southern mare, (Mr. Wynn's) Flirtilla, beating Moonshine, in two four mile heats. These were the only horses that contended for the purse, the day being unpleasant and rainy.

The following horses have been entered for the three mile heats this day, purse $300.—Mr. Van Marter's horse Oscar; Mr Calder's Miss Fortune; Mr. Laird's horse American Boy; and Mr. Lynch's mare Ariel.

The second day's races for a purse of $300, three mile heats, were run by four horses, Oscar, Miss Fortune, Suffolk, and American Boy, and won with ease by the last, an Eclipse colt, and not unworthy of his sire.

This day the following horses have entered for the purse of $200—two mile heats. Mr. Colden's horse Gamester; Mr. Van Master's horse Snap; Mr. Laird's horse Flagellator; Mr. Jones' horse Eclipse.

There will also be a sweepstakes run for by Mr. Straphen's horse American Boy; Mr Lynch's mare Roxana; and Mr. Jones' horse Fox.

We understand that a match was made yesterday between Flirtilla and Ariel, for $10,000 a side. The race to take place six weeks from yesterday, on the Union course, Long island, four miles and repeat.

Great Match Race.—The New York American of Friday last, says:

"The following terms of the match race between Ariel and Flirtilla, were agreed on this morning.—The race to take place on Monday, the 31st October, at 1 o'clock, for the sum of $20,000 a side, half forfeit—subject to the rules of the course. The distance three miles and repeat."

The third and last day's purse $200, two mile heats, was run for on Thursday, and taken by Mr. Van Master's horse Snap, in two heats, beating Gamester, Flagellator, and an Eclipse colt. Time of running first heat, 3 min. 48 sec. Second heat no time is given, but unless that is done, persons not present at the races, can form no idea of the worth or fleetness of the horses.

The sweepstakes were taken in two heats, by Fox, beating American Boy and Roxana.

CANTON RACES.

Baltimore, October 13, 1825.

The race yesterday, as was anticipated, afforded fine sport to the friends of the turf. Five horses started for the purse of $400, four mile heats, which was won in two heats by Dr. Thornton's sorrel horse *Southern Eclipse*, beating Governor Wright's *Pandora*, Mr. Digge's *Wharf Rat*, Col. Sewall's *Trippet*, and Mr. Sleeper's *Pavilion.* The heats were closely contested.

The following horses were entered for the purse of $300, three mile heats, run for *this day,* at 12 o'clock, viz:

Floretta, grey filly, 4 years old; rider's dress, scarlet jacket and cap—entered by Governor Wright.

Napoleon, bay, 5 years old; rider's dress, red jacket and yellow cap—entered by Mr. Schilling.

Brainworm, sorrel, 4 years old; rider's dress, yellow jacket and cap—entered by Mr. Finley.

Tickler, sorrel, 3 years old; rider's dress, pink jacket and black cap—entered by Col. Sewall.

Lafayette, sorrel, aged; rider's dress, red jacket and black cap—entered by Mr. Sleeper.

The above purse was taken by Col. Sewall's *Tickler,* winning the two first heats.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 14, 1825.

☞ We have been requested to state that the subjoined *notes* were prepared to be attached to the manuscript of Mr. Pomeroy's "Dissertation on the Mule," published in the American Farmer, Vol vii. No. 22, but were accidentally omitted to be furnished to the editor, viz:—page 170, col. 1st. line 1st. at the word *mule.** Page 172, col. 2nd. line 14 from top, at *acres.*† Page 173, col. 2nd. line 30 from top, at *back.*‡ And there is an error of $25, in the preceding figures.

☞ Some valuable remarks from Robert Sinclair, on the plantation and culture of fruit trees, shall appear in our next.

COTTON.—The Petersburg Republican says, that notwithstanding the unfavourable news from Europe, two loads of cotton were sold in that market on Monday last, for 17½ cents, Virginia money.—The Intelligencer, however, of the same place says, this price was given in compliance with orders from the *northern manufacturers*, and that the price must be expected to decline, as the present home demand subsides.

☞The PENNSYLVANIA AGRICULTURAL SOCIETY will hold their third Exhibition, Cattle Show, and Fair, in Philadelphia county, under the act of incorporation, on Wednesday, Thursday, and Friday, the 19th, 20th, and 21st of this month, on the Bristol road, between Holmesburg and the Red Lion Inn.

Until it was too late to insert it, we were under the impression that the handbill of this exhibition had been inserted. We have now room only to state, that there are premiums offered for—Neat cattle amounting to $410; for sheep $149; for horses and ploughing $210; oxen and ploughing $160; swine $23; crops $135; butter (preserved not less than three months,) $10; cheese $10; sugar $10; pot or pearl ash $10; domestic wine $10; cider $10; implements of husbandry $35; household manufactures $161. The bill may be seen at the office of the American Farmer. In the case of horses, the highest premiums are two of $50 each, plate, for the best Cleveland bay and the best thorough bred stallion—$50, in plate, is offered for the best yoke of oxen—and we observe that in the case of sheep, the highest premiums are offered for a *Southdown* ram and ewe, $20 plate, in each case.

Powelton, near Philadelphia, Oct. 10, 1825.

JOHN S. SKINNER, ESQ.

Dear Sir,—I enclose a sample of wool taken from Mr. Miller's Saxon sheep. This gentleman has been for many years, zealously and most successfully employed in advancing the sheep husbandry of our county. His merinos have been long valued for the extraordinary fineness of their fleeces. A few half-breed Saxon rams, derived from his best ewes, will be offered for sale at the approaching show.

Some of the finest sheep from Mr. Kuhn's and Mr. Waddell's merino flocks, as well as various parcels of mixed Dishley and Southdown sheep, will be exhibited, some of them being intended for sale.

As a steamboat landing is within a short distance of the site for the show, there would be little difficulty as to transportation.

I am sir, your obdt. servt.
JOHN HARE POWEL,
Correspond'g Sec'ry. Penn. Agri. Soc'ty.

Powelton, near Philadelphia, Oct. 10, 1825.

DEAR SIR,

I have the honour to state, that the Pennsylvania Agricultural Society will hold their Exhibition, on the 19th, 20th, and 21st. inst. on the New York road, about ten miles from Philadelphia; and in behalf of my associates to assure you, that we should have great pleasure in receiving the officers and members of the Maryland Agricultural Society.

I am sir, your obdt. servt.
JOHN HARE POWEL,
Correspond'g Sec'y Penn. Agric. Soc'ty.

JOHN S. SKINNER, ESQ.
Correspond'g Sec'y Md. Agric. Soc'ty.

TOBACCO.—Amount of inspections in the three state warehouses, during the last week—549 hhds.

STRAW CUTTERS AND DAVIS' PLOUGHS.

The subscriber continues the manufacturing of his Cylindric Straw Cutters, at No. 36, Pratt-street. Those desirous of obtaining them this fall would do well by sending in their orders as early as convenient. He also keeps the various sizes of Davis' Ploughs on hand, for sale, made of the best materials and in the best manner. These Ploughs having thus far met the most sanguine expectations of the purchasers, he flatters himself with a still increased demand for them; every possible exertion will be made to procure the best metal for the shares. He has sold a single share for fifty cents, that has broken twenty acres of ground without any other expense to the plough.

Also on hand, a quantity of Brown's Vertical Spinners, for spinning wool, by which one woman may do three times the work that may be done on a common wheel All communications by mail (post paid,) will be punctually attended to.

JONATHAN S. EASTMAN.

N. B.—A quantity of Plough Timber wanted immediately, to pay a part cash, and a part in implements, &c.

October 14. J. S. E.

CONTENTS OF THIS NUMBER.

Curwen to Mr. Thompson on his "Alderney" Cattle—Comparative Estimates of capital employed in rearing Horses, Cattle and Sheep, in West Pennsylvania—New Theory of Burned Clay as a Manure, by Dr. Jos. E. Muse—Palma Christi, inquiry—Mexican Piggeries—Dorchester Agricultural Exhibition and Fair—Address to the citizens of Pennsylvania on Internal Improvement—On the history and culture of the Anemone—Long Island and Canton Races—Editorial, Pennsylvania Agricultural Society's Exhibition—Advertisement, &c.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9 00	9 50		
BACON, and Hams, . .	lb.	7	10	11	
COFFEE, W.I. Green, .	—	18	19	20	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	20	23		
Georgia Upland, . . .	—	16	13		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	7	10	12	15
FEATHERS, Live, . . .	—	33	35	37	
FISH, Herrings, Sus.	bbl.	2 62	2 75	3	
Shad, trimmed,	—	6			
FLAXSEED, Rough, . .	bush	1			
FLOUR, Superfine, city,	bbl.	5 00	5 50	6 00	6 75
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	4 50	4 75	none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	50	57		
Wheat, Family Flour,	—	1 05	1 15		
do. Lawler, ...	—	92	1 00		
do. Red, ...	—	95	1 00		
Buckwheat, ...	—	55	75		
Rye, ...	—	55	60		
Barley, ...	—	50			
Clover Seed, Red . .	—	5 00	5 50	6 00	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25	2 50		
Oats, ...	—	30		35	
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1 50	1 62		
HEMP, Russia, clean, .	ton	165	180		
HOGS' LARD, ...	lb.	10	11	12	
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	23	25		
MOLASSES, W. India,	gal.	34	40		5
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	6½	7	8	
NAVAL STORES, Tar,	bbl.	2 25			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2	2 12		
OIL, Whale, common, .	gal.	27	30		
Linseed, ...	—	60	65		
PORK, Baltimore Mess,	bbl	14 50	15		
do. Prime, . . .	—	11			
PLASTER, cargo price,	ton.	5 50			
POTATOES, ...	bush	75	1 00		
RICE, fresh, ...	c.lb.	3 25	3 50	5	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	1
WHISKEY, 1st proof, .	gal.	29	31	38	5
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	34	35	50	
SUGARS, Havana White,	c.lb.	13 00	15 00	14 00	16 0
do. Brown, . .	—	11 00	12 50		
Louisiana, ...	—	9 50	11 00	11 50	12 5
Loaf, ...	lb.	19	22	20	2
Lump, ...	—	16	18	19	
SPICES, Cloves, ...	—	85	90	1 00	
Ginger, Ground, . . .	—	7	10		
Nutmegs, ...	—	1 75	2 00		
Pepper, ...	—	18	19	25	
SALT, St. Ubes, ...	bush	40	42		
Ground Alum, ...	—	52		62	
SHOT, all sizes, ...	cwt.	9 50	10	12 50	
WINES, Madeira, L. P.	gal.	2 00	2 50	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20	1 50	1 7
Claret, ...	doz.	3	3		
Port, first quality, . .	gal.	2 00		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashe but free tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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* Herodotus says, that in the army of Xerxes, which invaded Greece, there were "chariots of war drawn by *wild asses.*" M. Larcher, a celebrated commentator renders them *zebres* in his French translation, which he supports from Oppian, lib 3. v. 183. But it is now well known that the *zebra* is of a species entirely distinct from the *ass;* and Buffon asserts, that none were ever discovered out of Africa; and there only in the southern hemisphere. It is therefore highly probable that those alluded to, were the *hemionus*, which are described as much larger than the *wild ass*, and nearer the size and form of the *zebra.*—See Beloe's Herodotus, Polymnia, chap. 86.

† Mr. Pitt. in an able "Essay on the Consumption of Corn," published by the Board of Agriculture, in 1806, estimates that each *draught* horse employed on roads, canals, and mines, in pleasure carriages of all descriptions, and carts in cities, consume the average product of *four* acres for oats and beans, and *three* acres for hay. It is stated in the same essay, that "the aggregate of oats *imported* into England (*only*) for twenty years ending in 1797, amounted to the enormous quantity of 8,655,046 *quarters*"—upwards of *sixty-nine millions of bushels!*—See "communications to the Board of Agriculture," vol. 5.

‡This estimate, (375 *dollars*,) is the maximum of expense for subsistence and other items, supposing the whole number of horses should be required for *one* boat; but they will unquestionably be employed for a succession of other boats. And should all the *relays* perform a tour on the line *every day*, the minimum of expense would be *seventy-five dollars* for each boat. *Facts* derived from further information, may enable us to fix the *medium*.

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Book and Job Printing is handsomely executed.

AGRICULTURE.

LIME-KILNS.

Dear Sir,

In a communication which I made you some months ago, and in a conversation which I lately had with you on the subject of lime-kilns, I called your attention to a kiln constructed by Mr. Peter Lossing, of New York, as possessing, in my opinion, very superior advantages. By his mode of calcining limestone, the saving of *time* and of *wood*. is in the proportion of one half, as I stated to you in a former communication.

In the arts, there is scarcely any substance of greater utility than lime: as an ingredient in mortar, stucco, plaster, &c.; and in agriculture, as a manure, it is of infinite importance and of the most extensive utility. Any plan, therefore, that can be devised to cheapen the article, must be of publick utility. Believing that kilns constructed on Mr. Lossing's plan will have that effect, I have put myself to some little trouble to procure from the patent office, a certified copy of the specification and drawing, which I now send you for publication in your useful paper.

Respectfully, yours, &c.

W. NOLAND.

SPECIFICATION.

The foundation of the kiln being laid, either elliptical or circular, leaving an opening in front of about two feet wide and about ten inches high, to answer as a mouth for the admission of air to the furnace, or oven to the kiln; from this mouth two flues, or ash-holes, ought to extend as far back as the fire is to reach, beginning at the aforesaid mouth and running at suitable angles, so as to intersect the floor of the oven, or furnace, about equally; or in a small kiln, a smaller mouth, and a single flue, or ash-hole, extending back, will answer. A larger kiln, on the same principle, requires two flues, or ash-holes, or more than two, to open into the same mouth, or at different mouths, in any part of the kiln, extending in angular, parallel, or any other direction.

These flues, ash-holes, or passages for the admission of air, should be about ten inches wide, and as many deep will answer; and may either be sunk into, or raised above the ground floor of the kiln; though it is more convenient to have them just raised so that the hearth or floor (on which the fire is to be kindled,) when finished, is about sixteen inches high; to be built of either brick or stone. Over these flues, or ash-holes, should be placed grates of iron, narrow stones that will bear the fire, or even good lime-stone will answer. If of stone, they ought to be five or six inches thick. When these flues, or ash holes, are finished, the spaces between them and the sides of the kiln, may be filled up with stone, earth, or any other matter suitable therefor, so as to bring the whole floor, or bottom of the kiln, bevel with the grating.

When iron is used for grates, it may be right after two or three grates are placed, to cover a space of about a foot with stone; and thus, alternately, grates and covered places, the whole length of the flue, ash hole, or air passage, so as to prevent too great an admission of air.

A large strong stone, or other proper material, should be placed in front of the kiln, over the mouth above contemplated, so that its surface be about level with the surface of the grate; which stone serves as a bottom to the passage for the admission of wood, which passage should be no longer than is necessary to receive the wood—and so constructed, that by a door of iron, or other metal, it may be shut perfectly close, from time to time, when a sufficiency of wood is thrown in. When the fire is kindled, the door being shut, the flue or flues at the bottom should be open, to admit the air through the grating under the fire. The flues may be cleaned, occasionally, from the ashes or coals, if it should be requisite, by an iron hoe, or small iron rake, provided for the purpose. Kilns, built in the usual form, may be easily altered, so as to possess the principles mentioned in the specification.

The advantages proposed from this improvement, are the saving of at least one half the expense, in the quantity of fuel; performing the operation in a much shorter time than in the common way; and the advantage also of being able to keep the fire continually acting upon the materials with its full force; which is difficult to be done in the usual mode, as it is necessary often to suffer the common kilns to cool, in order to clear them—which can be done at pleasure in the mode prescribed in this specification, without impeding the process.

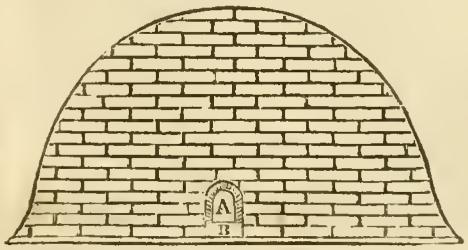
The principle on which this foregoing specification is made, contemplates similar flues, or ash-holes, under the arches of brick kilns, with suitable gratings, at proper distances. The fires may be regulated, at the discretion of the operator, by closing the mouth with plates of iron, or otherwise.

N. B. The gratings should be one inch and an half apart, and when the limestone, by heating, is very subject to cracking and flying above the fire, they should be one inch wider, to allow for clogging the grates with the scales of stone that fall down.

PETER LOSSING.

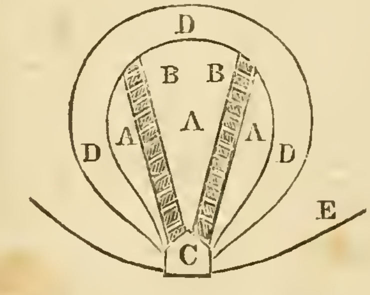
James D. Longe, } Witnesses.
Solomon Lossing, }

Front view of the Kiln.



A. The door, or passage to receive the wood.
B. The mouth, or air-passage, for the flues.

Ground Plan.



A. The floor, or hearth, of the oven or furnace.
B. The flues, or air-passages, under the grating.
C. The strong flat stone above the mouth of the flue.
D. The arch, oven, or furnace, built of limestone, for calcination.
E. The wings, forming the front of the kiln.

The transverse diameter of the ground plan within the kiln is calculated to be about 12 feet.

REPLY TO MESSRS. HURLBERT & CO.

Devon Cattle—good qualities disputed.

East Windsor, Conn., October 4, 1825.

To John S. Skinner, Esq.

I have noticed in the American Farmer, two communications upon Devon Cattle and Coke Devons, from Messrs. Samuel Hurlbert & Co. In the first, they say it is ascertained that the cows are superior for quality of milk, and for quantity are as good as any breed they are acquainted with. What *other* breeds of cattle *they* are acquainted with, I do not know; but I do know, that the cows in this town, universally show finer milking qualities than any Devons I have ever seen; and I have seen all the best stock the Messrs. Hurlberts possess, at their farm, and at the Hartford and Litchfield cattle shows.

Their full blood cow does not appear to be a decent milker; and from the appearance of their half bloods, I should not think there was one amongst them. From what I have seen of the descendants of Holkham, and what I have been told by good judges who are acquainted with the stock, I am fully satisfied that if a good milker is produced from them, she must take her milking qualities from what is called our native stock.

In the 2d communication, they give the same account they gave you in the first about steers; and add, how much more *red* cattle have always been considered worth than any other colour. The colour, *fine mahogany red*, is the only property the Devons possess to attract the attention of *any body;* and our best judges are not so much attracted with that alone, as some of the lookers-on at our cattle shows are, who may wish to write and publish something to please a customer. The purchasers of stock on Connecticut river do not pay any thing for colour; it is fine points *they* pay for.

They next notice a letter from Mr. E. Wolcott to Mr. Powel, and say they are not acquainted with him; that he never in his travels called to see their stock, &c. &c. Mr. Elihu Wolcott is a practical farmer, and son of Mr. Samuel Wolcott, and has had as good an opportunity as the Messrs. Hurlberts to be thoroughly acquainted with fine stock. Mr. Samuel Wolcott, of this town, was one of the most successful breeders of cattle we have ever had on Connecticut river. He used a bull that was imported from one of the Cape de Verd islands, from which he and Mr. Epa. Bissell bred one year fourteen steers, which were fed upon meal one winter only, and at four years old they were sold in New York, for upwards of one hundred dollars each. Mr. Wolcott had another bull, sired by an imported bull, from which he bred many valuable animals, and a descendant of that bull was the famous Connecticut ox.

Mr. E. Bissell bred and fatted a pair of oxen, which were sold and killed in Philadelphia in 1811; they were descendants from Mr. Wolcott's bull, and were there pronounced by the best judges, the best *pair* of oxen ever in their market. The particular breed of the bulls is not recollected; but the steers from them were generally spotted, and had small fine horns. The Messrs. Hurlberts also mentioned our cattle show at Hartford, and say there were exhibited from Farmington, a number of half blood Devons, sired by Holkham, which were much admired, and in competition with every other breed, short horns not excepted, took every premium.— The records of our society, will show the gentlemen they were mistaken, when they made the assertion for one half blood, of Denton's stock, and I believe the only one exhibited did take a premium, and many premiums were also awarded for native stock.

They also introduce a paragraph from the Connecticut Mirror, on the Devonshire breed of cattle, which is not printed in the American Farmer as it appeared in the Mirror. As it was printed in the Mirror, it was noticed by many, and why it appeared at that time, (a week after the official account of the show was published,) was well understood; for on the same page of the same paper was an advertisement of Devon cattle for sale.

I am, respectfully, your friend,
And obed't serv't,

HENRY WATSON.

ANSWER TO CERTAIN INQUIRIES ABOUT COTTON.

Question 1st. What quantity nett of Sea-island cotton is yielded per 100 lbs. in the seed?

Answer. It depends much on the season. and the product per acre: from 30 to 33 lbs.

Q 2d. How much per acre does it produce?

A. From 75 lbs. of clean merchantable cotton to 250 lbs.—in some few instances more.

Q 3d. At what distance is it planted, and is more than one tree left in each hole?

A. The common practice with us to guard against cold weather, too much moisture, and worms, is to drill. Thin out at each working until your plants are forming; you can then discover a choice in them: then finally thin to from 10 inches to 18. Much depends on strength of *soil.*

Q. 4th. Is there more difficulty in ginning this (Sea-island,) than the other kinds?

A. It is much easier separated from the seed.

Q 5th. What kind of gins are used. and could a model of one of the most approved kinds be obtained?

A Foot-gins are commonly used, and most approved of, from its simplicity; and separating without too much friction the seed from the cotton. A model could be sent; but as many of the mechanics north of this make gins for us, it is confidently believed, without much difficulty, one could be obtained: if not, with pleasure I will furnish a drawing.

If the answers given can, or will in the smallest degree, gratify the gentleman. you are at liberty to communicate them through the medium of your very valuable paper. G. J. L.,

A Planter of St. Luke's Parish, S. C.

September 24, 1825.

HORTICULTURE.

ON THE MANAGEMENT OF FRUIT TEEES.

The best time having now arrived for planting fruit trees, I have thought it might be acceptable to many of our young farmers to have the benefit of occasional attention for twenty years, in planting, trimming and cultivating them; having raised an orchard during that time, which is now in full bearing; and the personal attention I gave the same, has enabled me to make my observations from year to year, and draw the following conclusions.

BEST VARIETIES.

There is frequently one great mistake in the outset, in planting orchards, which is that of planting too many kinds of apples, peaches, &c. as there are endless varieties of both; but there are but few kinds of either which are very superior. If cider is the object, a few kinds are best;—as in picking and storing, they may the more conveniently be kept separate, which is recommended by all good cider makers: and if designed for table use, they are also more easily stored in one parcel than in many. The different sections of the country have their favourite apples;—the Virginians, the crab; the Marylanders, the black red streak and Robinson; the Pennsylvanians, the grayhouse and wine-sap; the Jerseymen, the Harrison apples for cider: but the three last are much the best in my opinion, as they hang on until the weather is cool, and the farmer is at leisure to attend to making the cider. They produce a cider with good body, will clarify well, and if bottled will keep through our hot summers for several years. For table use and cooking, a few kinds to succeed each other through the summer and fall, and the larger proportion for winter keeping. The most approved kinds for the fall, are the rumbo, bellflower, English red streak, and maiden's blush; for table during winter, the Newtown pippin and earthouse; for spring, the grindstone and golden russet. Many other table apples might be mentioned equally good, except that of the pippin, which I esteem the best table apple in our country, but they require rich land.

SITUATION, EXPOSURE AND SOIL.

Having made a judicious selection of apples, peaches, cherries, pears, plumbs and apricots, for the different seasons, and purposes wanted. the next consideration is to make choice of a suitable situation for the orchard. High, dry situations are best, being less subject to frost in consequence of the absence of moisture; and if circumstances will admit, place it northerly from the buildings. The best soil is a sandy loam, but any soil may be improved by artificial means, if too stiff, add sand, manure, or rich earth from the wood: by the use of sand, or clay, the time of the fruit ripening may be very properly changed, on some occasions, to suit circumstances

METHOD OF PLANTING.

When the place is decided on for planting. lay out the holes as follows. Twelve feet from the fence drive stakes forty-five apart in the first row; and for the second row, set up the stakes twenty-two and a half feet from the first, beginning from the fence thirty-four and a half feet, which will place each tree in the second row opposite the centre, between the trees in the first row thus:

*   *   *   *   *
  *   *   *   *

By this method of planting we can put more trees on the same ground, with equal benefit of light and air. The above distance is intended for apple trees, peach trees might be ten feet nearer.

Dig the holes some time before they are wanted, three feet square and one foot deep, laying the virgin or top soil in one heap, and the clay in another. With the first, plant the tree about its usual depth in the nursery, spreading the roots equally and horizontally around. first cutting the tap root, and trimming the bruised ones; and as the earth is filling in, press it down with the foot, frequently shaking the tree upwards to settle the earth equally among the roots. And in a north-west direction from the tree, drive in a stake, (this may be the stake first used to range the holes,) five feet long, around the head of which wrap a wisp of straw, and tie therewith the tree to it, which will prevent the tree from becoming loose with winds, and preserve it from many accidents.

TIME OF PLANTING AND AFTER TREATMENT.

Fruit trees may be planted any time between the fall of the leaf and the starting of the buds in spring, provided the frost will permit, but the fall is the best time. as the earth gets settled close to the roots during the winter, and many fibrous roots will be put out during the fall and spring, which will enable the tree to grow right off with the first growing weather, and enable it to stand the heat and drought of the summer; but if spring planting is adopted, in order to prevent the effects of the summer drought, throw a few shovels full of littery manure, or rotten chips from the wood pile, around the roots of each tree; and in order to keep the trees clear of insects, and preserve their bark thrifty and smooth, wash their bodies once a year with the following composition:—to one quart of soft soap, add two quarts of soft cow dung, and as much water as will make it of suitable consistence to put on the trees with a brush; and as the trees advance in size add a little lime to the above mixture, but the heating quality of the lime requires judgment and care in its application; and in order that the trees may grow and thrive well, the ground ought to be kept rich by constant or frequent cultivation, and occasional manuring without raising crops among the trees, as the fruit will soon be a sufficient crop if well managed.

TRIMMING.

As the trees progress in growth and size, the all important work of trimming must be carefully attended to, or else much of the nutriment of the trees will be wasted in superfluous wood, which, though neglected at first must finally be cut away; leaving large wounds which sometimes kill the tree. In order to preserve all the nutriment possible to go into the bearing branches, a regular plan must be adopted in forming the head of the tree, something like the following; let three limbs branch out from the main stem at equal distances from each other, and at a suitable height to plough under, (unless for spade culture, then the lower the better) and then let the main stem grow about two feet higher, from near the top of which train three more limbs so as to be above the vacancy of the lower limbs, which will give six to form the head of the tree, from each of which encournge side branches, sufficient only to fill the probable space when the tree is 20 years old; to do which they will be very thin for the first 7 or 10 years. At the same time take care to cut away all under and upper shoots, forming each limb into a kind of fan, which will receive the rays of the sun equally, and ripen the fruit well. When the main limbs grow long and slender, shorten them, and the wood will become strong and vigorous, and the fruit, in consequence, will grow much larger. Much nutriment is lost, and the growth of the trees retarded by neglecting to rub off the young sprouts about the first of June, when tender, and before they have exhausted the tree much, and the wound would immediately heal over.

PEACH TREES—HOW TO MANAGE.

The above treatment will suit either apples or peaches; but to raise good peach fruit at this time, requires much more care and attention, in consequence of the worm and yellows. The latter may be prevented by rich mellow ground, and the former by care and attention: the worm which attacks the tender bark of the peach tree, at or near the surface of the ground, is the most formidable enemy we have to contend with; and by adopting means to prevent the fly in the summer season from depositing their eggs on the peach tree, near the surface of the ground, which, when hatched into worms, descend a little below the surface of the ground, until they reach the tender bark of the roots of the tree on which they feed, and in time entirely destroy the same. Many ways and means have been lately recommended to prevent their effects; such as plaistering around the roots with lime mortar, on the surface of the ground, binding a piece of pitched or tarred canvass tight around the tree, near the ground, and covering the lower edge with earth; both which will prevent the fly from laying their eggs in a situation where, when hatched, they can obtain nourishment, and consequently perish. But both these are temporary; the first will crack and give way with the growth of the tree and frost; and the latter will soon decay; and both will require frequent renewment, which, if carefully attended to, would answer well, and the best of any thing yet recommended. We frequently find trees of a year old with the worms in them; and I have thought it high time to commence our care at the time of planting, and by adopting some plan which would last for years, without requiring the farmer's attention twice a year; which often is very inconvenient to him, and much oftener neglected, and the trees die. The plan I have thought of, and shall with confidence adopt, in a peach orchard which I intend planting this fall, is, to make rough boxes, six or eight inches in the clear and twelve inches long, and open at each end: on planting the trees, I propose planting one of these boxes round each tree, the lower end to be sunk into the ground about three inches; I will then fill up the box with sand, which will be about nine inches above the surface of the ground, and will remain in a dry state; and of course will not render the bark of the tree tender, and pervious to young worms, but rough and hard for some inches down the box; which, in my opinion, will render their attacks unavailing, and leave the tree to flourish as in former times, without any further attention.—These boxes would require but three cents worth of boards, and may be cut and nailed together by any farmer; and then his care is finished at planting the trees, which would otherwise be neglected by the most careful farmer, engaged, as he is, with his many and various cares through the year.

Having flourishing trees, we may feel encouraged to extend our care still further, to obtain fine fruit. Large, rich and high flavoured fruit cannot be obtained, without having the fruit thin enough on the branches to have a fair opportunity of receiving the rays of the sun, and the requisite nourishment from the roots: to accomplish this, each bearing limb must be examined and divested of all superfluous twigs, which will in a great measure remove the necessity of thinning the fruit on the limbs; yet if fruit of the *finest* quality is expected, the peaches must be thinned on the branches, from 4 to 6 inches. When the fruit has grown to the size of a plum, the ground under the trees must be ploughed once in three years *deep*, and ploughed at least three or four times each summer By this kind of care, all kinds of fruit can be improved to a state beyond any calculation, and the fruit would be acceptable to the weakest stomachs; which, when left to nature, are often so indigestible as only to be fit for hogs. We have the finest soil and climate, perhaps, in the world, for raising those choice and delicate fruits, and which will come into full bearing in a very short time, with the above attention. What can add more to the sweets of country life, than a fine succession of good fruits the year round? After a little care and attention, they seem to come without either labour or toil, and seem like something found; and no foreign fruit can be compared to those we may raise and take fresh from the tree or vine. Many people of great wealth know no thing of enjoyment, for want of good home-made fruits. Take away their bread, meat and brandy, and their comforts are gone. Instead of having the wholesome addition in spring, of good large strawberries, raspberries, gouseberries and cherries; and summer and fall, pears, peaches, apricots, apples, grapes and nuts—their large crops of grain, tobacco, and even gold itself, falls far short of imparting that pleasure which those choice fruits furnish.

ROBERT SINCLAIR.

INTERNAL IMPROVEMENT.

TO THE CITIZENS OF PENNSYLVANIA.

(Continued from p 238, American Farmer.)

The average freights paid in Pittsburg in 1815-16-17 and 18, were $1,000,000 per annum. In 1822, they fell to $700,000, the rates being much reduced. (See note C) The transportation of late has greatly increased; and, from the very best information, we are warranted in stating that at present the freights amount to $1,000,000. And in the event of the completion of the communication, the chief part of the goods which would otherwise take the route to Wheeling, would pass on the canal. The freightage from the west would be increased four or five fold; as the chief part of the cotton of Tennessee and North Alabama—the hemp and tobacco of Kentucky—and the potash, the flour, the corn, of the north-west of Pennsylvania and the eastern and southern sections of Ohio and Kentucky, would take this direction. The tonnage of the produce transported on the Champlain and Erie canals, is nearly five times as great as that of the merchandise passing westward towards Utica and Buffalo. The sales of merchandise would increase proportionably.

While we cheerfully admit, and rejoice at the manifold and important advantages which our sister state, New York, will deservedly reap for ages, from the liberality and perseverance which enabled her to complete her magnificent canals, we deem it but right to state the reasons on which we ground our belief, that our Pennsylvania canal will be much more productive.

The Erie canal has hitherto been chiefly confined to the productions of the forest and of agriculture. The amount of gypsum, clay, iron castings, marble, burr and grindstones, which passed on it eastwardly last year, was only 9438 tons. The residue of the freights in that direction, viz. 119,014 tons, were (as we have stated,) chiefly the productions of agriculture and the forest. In these productions we are equally blest with New York; and in addition, we may count largely on our coal and iron, which, wherever they are found near to canals, afford them their chief support. In these we abound to an extent not exceeded in any other country in the world. The tolls on them alone would probably be sufficient to pay the interest on the capital invested. Of the former, none we believe has yet been discovered in New York—and the supplies of the latter appear to be limited, compared with the superabundant quantities scattered through our state. The tolls on those articles will probably be double those on agricultural productions. In other mineral treasures we are highly blest. Salt, to an extent equal to the quantity produced in New York, we have the capacity of furnishing. It is to be found almost every where near the western waters of the state. There is, moreover, a much greater portion of the population of the western states likely to avail themselves of our canal than of the Erie canal. (See note D.) And we shall derive very important advantages from the circumstance, that the navigation of lake Erie is generally, if not always open at Erie Harbour, three weeks earlier in spring, and as much later in autumn, than at Buffalo or Black Rock. (See note E.) These are the periods when it is all-important to the country merchants to procure their supplies for the two great seasons of trade. Again: Philadelphia is abuut 111 miles nearer to Erie Harbour than New York. (See note F.) That harbour, when the improvements are completed, which are now in successful progress, and for nearly the whole of which appropriations are made by the general government and that of Pennsylvania, will be beyond all comparison the best and safest on the lake. In fact it may be said that it will then be *the only safe harbour on that inland sea.*

Statements have been made of the dividends on canal stocks in Great Britain, to depreciate the importance of canals, and to prove that they are not so lucrative as is generally assumed. The whole number of canals in Great Britain, exclusive of those below five miles in length, is 102, of which 80 are summed up together, on which the dividends are stated to average 5¾ per cent This is by no means a correct procedure. While many of those canals are highly profitable, in consequence of a proper location; several, on the contrary, are wholly unprofitable, having been constructed in a most prodigal manner; some located in situations where the traffic did not require them—and some so destitute of adequate supplies of water, as to be little better than dry ditches. It must be obvious, therefore, that such an amalgamation affords no correct criterion of the pecuniary remuneration of canals. Even with this very great disadvantage, however, the average dividend, as above stated, is an adequate one, and far above the actual interest of money in Great Britain. And it is a point universally conceded, that much of the prosperity of Great Britain has arisen from the facilities of intercourse afforded by her canals. In fact, it may be assumed as a maxim, to which there is scarcely an exception in the world, that every canal, judiciously located—honestly constructed, and where there is a sufficient supply of water and abundant traffic, yields as handsome a dividend as could be reasonably desired, and as almost any other investment whatever, and indeed far beyond most others.—There are fifteen canals in Great Britain, of which a single share in each cost 1525 *l.*—whereas the prices in June, 1825, were 13,823 *l.* The aggregate of the dividends was 575 *l.*—equal to 37 per cent. (See note H.) The failure of fifty or five hundred canals injudiciously located, or too expensively constructed, could not outweigh the complete success of these fifteen, which were justified by local circumstances.*

But the consideration of the dividends on the stock, or the remuneration for the capital invested, which, with private individuals, might very properly be regarded as a paramount object, sinks into insignificance, when compared with the vast increase of happiness and prosperity which such works produce. It may be averred, without danger of error, that had the New York canals cost $20,000,000 instead of $10,000,000, it would have been as prudent an investment of capital as has ever been made in this country since the days of Columbus. Indeed, had the whole amount been raised by taxes, provided they were judiciously imposed, the investment would be warranted For every dollar the citizen pays, they would in the course of a few years be reimbursed ten.

Our two wars fully displayed the ruinous consequences of the want of canal communication. Judge Peters, who, during the revolution, acted in the war department, has recently stated, that—

"At one time, when the main army subsisted, during ten or twelve days, on Indian corn alone, there was a sufficient quantity of provisions, both meat and flour, not only to prevent want, but to afford plenty and every comfort. They could not, with unremitting efforts, transport the supplies from distant magazines where they were collected. This," he adds, "is not a solitary instance; for have known it occur in many others. I have known brigades of wagons, sent to distant magazines, so long delayed, by impracticable roads, impassable streams, and other impediments, that the attendants and the horses consumed the greater part of full ladings, before they could reach our camp."

The transportation of 100 pieces of cannon from Frenchtown to Newcastle, 18 miles, during the late war, cost $4551—and, in the wretched state of the roads, probably required fifteen or twenty days; whereas it would not have cost more than $100, and required only one or two days, had there been a canal in that quarter. Delays such as these might produce losses equal to the expense of a canal and even endanger the safety of a state. The extra expense of transportation during the late war, through the want of canal communication, would have cut canals from Boston Bay to South Carolina. The transportation of cannon which cost $400 at the foundery, amounted to 3 and $4000. Pork has cost government $120 per bbl. The transportation of flour has cost, in some instances, 40 or 50 dollars per barrel. Mr. Benton, member of the United States' senate, from Missouri, stated on the 24th of February last, that "sixteen millions of dollars had been expended during the late war, on transportation over roads so abominable as to make the cannon balls cost a dollar a pound."

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* The Regent's Canal, of eight miles, cost 700,000 *l.* [$3,150,000.] The Thames and Severn, most injudiciously located, and wholly unnecessary, cost 255,000 *l.* [$1,147,500.] The former appears to make no dividend. The shares of the latter were 100 *l.* and are now only 30 *l.* Can any inference be drawn against canals generally from the result of the folly displayed in these and similar undertakings? The Grand Junction Canal, with its branches, is only 147 miles, and cost 2,000,000*l.* [$9,000,000.] Notwithstanding this enormous expense, above $61,000 per mile, it is so very profitable, in consequence of its being judiciously located, that the shares are at an advance of above 200 per cent. In the European Magazine, of June last, they are quoted at 338 *l* per share. The main canal has one hundred and one locks, being more than one for every mile.

"Let us contemplate the immediate effects of the execution of this work. Throughout the fertile districts of our commonwealth," wherever the course of the canal may be located, many "*millions of dollars* will be expended. While the work is in progress, and until it shall be completed, the farmer residing within fifty miles of any part of its route, will find a market for the produce of his farm and profitable employment for his oxen and his horses. More than six thousand persons will be engaged in excavating the earth—in making locks—in building bridges and aqueducts, and in removing obstructions from and improving the beds of the rivers. Mechanics of all descriptions will be enriched by the large sums of money which will be distributed among them for the various operations they will be called upon to perform. Unlike the expenditures for war, or the investment of capital in adventures to distant countries, for the purchase of the manufactures of foreign hands; the expenditures for this home undertaking will be distributed among ourselves; thus fostering and rewarding our own industry and promoting the prosperity of our own citizens. Animating the whole country by its influence, the money which will be paid away will still be retained among us. Like the seed, which 'fell upon the ground,' 'it will bring forth an hundred fold.'

"As soon as the canal is completed, then will commence the era of general and extensive prosperity among all those who shall make use of the facilities and advantages it will afford. From every part of the western section of the commonwealth, the productions of the field, the forest, and of the mineral kingdom, will be sent to a sure and profitable market."

To the arguments derived from the increase of wealth, the prosperity and the population of the state, which must necessarily flow from opening this communication, must be added those that are to be drawn from the pernicious consequences of remaining stationary on this grand point, while our neighbours are advancing with such rapidity. Notwithstanding the great advantages this state enjoys, second, we repeat, to none in the Union, the progress of settlement has been slow compared with that of New York, whose population in 1800, only 586,050, rose, in 1820, to 1,372,812—being an increase of 133 per cent. Our population in 1800, was 602,548; in 1820, it was but 1,049,458—being an increase of only 70 per cent. The disproportion will probably be greater at the next census—and *unless we open adequate markets for the citizens of the interior, they will gradually migrate to a state where they can reach a market at the distance of* 500 *miles, at a third part of the expense to which our farmers are subject at a distance of* 250 or 300 *miles.* It is now a question whether we shall allow our state to be drained of its wealth, to increase that of a neighbour already advanced to a towering height, or whether we will make adequate exertions to secure to ourselves the abundant resources with which we have been blest by nature.

The spirit of internal improvement is generally spreading throughout the Union, and the most active preparations are making in various states for cutting canals and improving the navigation of rivers. Want of room prevents us from entering into detail on the subject. We shall therefore confine ourselves to the states of Indiana, Illinois and Ohio. The two first, among the youngest of the family of states, have made arrangements for cutting a canal to open a communication between the Maume river and the Wabash, which will open to them a connexion with lake Erie. The state of Illinois has actually incorporated a company for cutting a canal of about one hundred miles in length, to connect the waters of lake Michigan with those of the Illinois river, and thus secure a communication between the former and the Mississippi. The population of this state in 1820, was only 55,211, and yet she boldly undertakes two canals at the same time, about one-third of the extent of the canal necessary for a communication between Philadelphia and Pittsburg—a canal which many of our citizens represent as too arduous an undertaking!! The state of Ohio, just emerging from the multifarious distresses and embarrassments of a depreciated paper currency, stop laws, &c. &c. has, with a most laudable zeal and energy, already commenced two canals; one of about 320 miles, to connect lake Erie and the river Ohio; the other, about 60 miles, to open a communication between Cincinnati and Dayton. These magnificent enterprises she has wisely undertaken at the expense and for the advantage of the state. We hope that these examples, particularly the illustrious one of Ohio, will stimulate this powerful state to make adequate exertions, so as not to be distanced by her younger sisters. In 1800, when the population of Pennsylvania was above 600,000 souls, the above three states contained only 51,006. Let us add that the state of Virginia has established a permanent fund for internal improvements, of $1,368,960, whereof $1,241,200 is in bank stock.

It were to display an utter ignorance of human nature and of experience, to suppose that such an important measure, as the one now contemplated, how pregnant soever with immense advantages, could be carried into effect without opposition.—Scarcely any great measure was ever proposed in any country, that did not meet with formidable opposition, which is too frequently powerful in proportion to the utility of the object. When turnpikes were first introduced into England, there was an outrageous clamour excited against them, (See note G.) and they became so unpopular, that the populace destroyed in the night what had been done during the day.[*] During the French revolution, the government attempted to introduce turnpike roads in France—but the measure met with such opposition that the directory was obliged to abandon the undertaking.[†]

But we need not go to Great Britain or France for examples. Our state has furnished a striking case in point. The Lancaster turnpike, the first executed in the United States, was extremely unpopular with, and met with violent opposition at its commencement, from those persons situated on or near the old road. New York also furnishes a strong case. The opposition to her canals was as ardent and violent as if the rain of the state had been connected with them. It was asserted that they were the result of folly and madness—and predicted that they would involve the state in inextricable difficulties, and finally prove nothing but great dry ditches. The fallacy of these predictions, fellow citizens, and the errors of this opposition, ought to be borne in remembrance, as a guard against the influence of similar predictions, now hazarded with equal confidence, and similar opposition which will ultimately be found to have been predicated on unwarranted prejudices. The more zealous and ardent the opposition, the more energy ought to be employed by the friends of the proposed measure. Never were zeal and ardour employed on a more important object, and never were apathy and indifference more culpable.

The great evil to be guarded against in this magnificent undertaking, is the prevalence of local interests and jealousies, which, if allowed free scope, will destroy all our hopes. Some of those who are not to be immediately benefitted by the location of the canal, regardless of its immense advantages to the state at large, will be arrayed in opposition to it. Already we find this spirit making its appearance, but we hope confined to a few. Preferences for particular routes will prevail—tend to produce embarrassment—and must be opposed by all the sincere friends of the public welfare. We ought all to be prepared to support, with heart and hand, the decision of the respectable board of commissioners, founded on the surveys and report of a competent board of engineers. If we cannot rely on this decision, on what can we place reliance?

In making these statements, we are aware that alarm may be given to existing interests. The proprietors of the great turnpike roads, which lead from one extreme of the state to the other, may be led to imagine, that the establishment of a cheaper mode of transportation will take away their custom: and those who are profitably engaged in the conveyance of produce and merchandise by wagons, may suppose that it will materially interfere with, if not wholly destroy their occupation. If this alarm were well grounded, and the effects here alluded to were such as must inevitably follow, however much we might lament the destruction of capital, and the injury to individuals, yet we could by no means admit that the progress of improvement should be arrested by such considerations. The turnpikes themselves might have been resisted on similar grounds. In many instances they changed the route, to the great prejudice of those who lived along the road; and in every instance they expedited the transportation of passengers and goods, so as to lessen the time employed in passing, and of course to diminish the demand for subsistence during the passage. Even the roads which preceded the turnpikes, rude as they were, destroyed the transportation by pack-horses. And the turnpikes, in the progress of change, have been obliged to submit to the injury inflicted by rival roads, laid out parallel to their course, sometimes throughout the whole extent. The truth is, that there is no conceivable state of things, however adverse to the public interest and prosperity, that may not be advantageous to particular persons; and there is no great improvement, however confessedly beneficial to the public, that may not at least appear to prejudice the interest of individuals Steam-boats, at their first introduction, encountered the most violent opposition from the owners of sloops and packets. It is stated, on apparently good authority, that the first steam-boat that navigated the Mississippi, was actually burned by some of the bargemen, who anticipated their ruin from the success of steam boats. The result has proved the folly of the prejudice that prevailed. There are twenty times as many persons employed now in navigating the Mississippi as formerly. Great undertakings are frequently opposed with violence from unfounded prejudice, even without the interposition of sinister motives. The water works, that noble effort of talent and energy, whereby Philadelphia is supplied with pure and wholesome water to an extent not exceeded in the world, and which are likely to yield an income that will in a few years furnish an adequate sinking fund to discharge the entire debt contracted in their establishment, and afterwards to defray a great portion of the city expenses; were violently opposed at the commencement, and declared to be a visionary, impracticable and burdensome scheme.

But the efforts of intelligence and patriotism, to improve the condition of a community, cannot be discouraged or checked by restraints like these. Mind is every where engaged with ceaseless activity, in promoting industry, and facilitating intercourse. Space, and every seeming natural difficulty, are yielding to the spirit of improvement, which is bounded in its indulgence by no law but that of the public welfare. Individual and private interests, though always entitled to regard, must give way to the paramount consideration of the great interests of the commonwealth.

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[*] Dupin's Commercial Power of Great Britain, vol. 1, page 47.

[†] Idem.

(Note C.)

Extract from a report to the House of Representatives of the state of Pennsylvania, dated December 24, 1822:

"To such an extent had the carrying trade arrived in consequence of the demands of the increasing population of the western country, that the average annual amount of carriage-money, paid to wagoners at Pittsburg alone, in the years 1816–17–18 and 19, exceeded $1,000,000, almost every dollar of which was drawn from the western states, and retained in Pennsylvania.

"The carriage of the outer lading at this period, [1822.] costs about $600,000, and the inward about $100,000—the price of carriage being very low at this time." Since that period, the inward carriage has increased probably three-fold.

(Note D.)

The following statement, which we believe substantially correct, has been recently published:

"Population of the western country probably depending for supplies—

"On New York,

Half of Ohio, ...	350,000
Part of Indiana, ...	20,000
Part of Illinois, ...	10,000
Michigan & North West Territory	17,000
Part of British possessions, .	13,000
	410,000

"On Philadelphia,

Half of Ohio, ...	350,000
Half of Kentucky, ...	300,000
Part of Indiana, ...	150,000
Part of Illinois, ...	50,000
Missouri, ...	70,000
North-west section of Virginia,	100,000
	$ 1,020,000

(Note E.)

"The subscribers, from their knowledge and observation of the trade and business of the harbour of Erie, and of Buffalo, and of the operation of ice at each of those places, believe it may be fairly estimated, that the average length of time that the harbour of Erie, and that part of the lake immediately above that place, is open and free from ice, before the harbour of Buffalo is open, is three weeks. Some of us have had opportunities of making observations on this subject for more than twenty years.

JUDAH COLT,
THOMAS FORSTER,
P S. V. HAMOT,
RUFUS S. REED,
JOHN F. WRIGHT,
GEORGE MILES, Jr.
J. KELLOGG,
DANIEL DOBBINS.

Erie, Pa., July 29, 1825."

(Note F.)

Statement of the distance of New York and Philadelphia from Erie Harbour.

	Miles.
From Erie to Buffalo, ...	90
From Buffalo to Albany, by canal,	353
From Albany to New York, ...	160
	603

	Miles.
Pennsylvania route to Pittsburg, as examined by the U. States' engineers, .	379
From Pittsburg to Erie, ...	113
	492
Difference, . .	111
	603

(Note G.)

"When a bill was brought into the British parliament fifty years ago, to establish turnpike roads throughout the kingdom, the inhabitants, for forty miles round London, petitioned against such roads; their arguments were, that good roads would enable the farmers of the interior country to bring their produce to the London market cheaper than they who lived nearer the city, and paid higher rent; that the market would be overstocked, the prices diminished, and they unable to pay their rent, or obtain a living The good sense of parliament, however, prevailed; the roads were made—the population and commerce of London increased, the demand for produce increased, and he who lived nearest to London still had a superior advantage in the market."—*Fulton s letter to Mr. Gallatin.*

(Note H.)

Statement of Canals in England, with the original cost of the stock of each, its present price, and yearly dividend, June, 1825.

	Original cost of each share.	Present price of each share.	Annual dividend on each share.
Birmingham,	*l.* 25	*l.* 340	*l.* 12.10*s.*
Chesterfield,	100	120	6.10*s.*
Coventry,	100	1200	44
Erewash,	100	1000*	58
Grand Junction,	100	338	10
Leeds and Liverpool,	100	540	15
Leicester,	100	380	14
Oxford,	100	800	32
Stafford and Worcester,	100	900	40
Trent and Mersey,	200	2100	75
Warwick and Birmingham,	100	300	11
Warwick and Knapton,	100	260	11
Loughborough,	100	4300	200
Melton Mowbray,	100	245	11
Mersey and Irwell,	100	1000	35
	l. 1525	*l.* 13,823	*l.* 575

From the above, it appears that canal stocks in England of the medium original cost of 1525 *l.*, pay a medium dividend of 575 *l.*, exceeding 37 per cent per annum, and are now worth 13,823 *l.*—more than eight times their original cost.

(*To be continued.*)

LADIES' DEPARTMENT.

RUDIMENTS OF COOKERY.

BROTHS AND SOUPS.

(*Continued from p. 230, American Farmer.*)

We again caution the cook to avoid over-seasonings, especially with predominant flavours, which, however agreeable they may be to some, are more extremely disagreeable to others.

Zest, soy, cavice, coratch, anchovy, curry powder, savory ragout powder, soup herb powder, browning, catsups, pickle liquor, beer, wine and sweet herbs, and savory spice, are very convenient auxiliaries to finish soups; &c.

The proportion of wine, (formerly sac, then claret, now madeira or port,) should not exceed a large wine-glassful to a quart of soup: this is as much as can be admitted, without the vinous flavour becoming remarkably predominant; though not only much larger quantities of wine, (of which claret is incomparably the best, because it contains less spirit and more flavour, and English palates are least acquainted with it;) but even *véritable eau de vie* is ordered in many books, and used by many (especially tavern cooks,)—so much are their soups overloaded with relish, that if you will eat enough of them they will certainly make you drunk, if they don't make you sick. All this frequently arises from an old cook measuring the excitability of the eaters' palates by his own—which may be so blunted by incessant tasting, that to awaken it, requires wine instead of water, and cayenne and garlick for black pepper and onion.

Old cooks are as fond of spice as children are of sugar, and season soup, which is intended to constitute a principal part of a meal, as highly as sauce, of which only a spoonful may be relish enough for a plate of insipid viands. However we fancy these, large quantities of wine, &c. are oftener ordered in cookery books than used in the kitchen; practical cooks have the health of their employers too much at heart, and love "*sauce ā la langue*" too well, to overwine their soup, &c.

Truffles and *morels** are also set down as part of most recipes. These, in their green state, have a very rich high flavour, and are delicious additions to some dishes; or sent up as a stew by themselves when they are fresh and fine: but in this state they are not served up half a dozen times in a year, at the first tables in the kingdom: when dried, they become mere "*chips in pottage*," and serve only to soak up good gravy, from which they take more taste than they give.

The *art of composing a rich soup*, is so to proportion the several ingredients one to another, that no particular taste be stronger than the rest; but to produce such a fine harmonious relish, that the whole is delightful. This requires that judicious combination of the materials which constitutes the "*chef d'œuvre*" of culinary science.

In the first place, take care that the roots and herbs be perfectly well cleaned; proportion the water to the quantity of meat and other ingredients; generally a pound of meat to a quart of water, for soups; and double that quantity for gravies. If they *stew gently*, little more water need be put in at first, than is expected at the end; for when the pot is covered quite close and the fire gentle, very little is wasted.

Gentle stewing is incomparably the best; the meat is more tender and the soop better flavoured.

It is of the first importance, that the *cover of a soup kettle* should fit very close, or the broth will evaporate before you are aware of it. The most essential parts are soon evaporated by *quick boiling*, without any benefit, except to fatten the fortunate cook who inhales them. An evident proof that these exhalations possess the most restorative qualities, is, that the *cook*, who is in general the least eater, is as generally the *fattest* person in the family, from continually being surrounded by the quintessence of all the food she dresses; whereof she sends to her master only the fibres and calcinations, who is consequently thin, gouty, and the victim of diseases arising from insufficient nourishment.

It is not only the *fibres* of the meat which nourish us, but the *juices* which they contain—and these are not only extracted but exhaled, if it be boiled fast in an open vessel. A succulent soup can never be made but in a well closed vessel, which preserve the nutritive parts by preventing their dissipation. This is a fact of which every intelligent person will soon perceive the importance.

Place your soup-pot over a moderate fire, *which will make the water hot, without causing it to boil, for at least half an hour;* if the water boils immediately, it will not penetrate the meat, and cleanse it from the clotted blood and other matters which ought to go off in scum; the meat will be hardened all over by violent heat, will shrink up as if it was scorched, and give hardly any gravy; on the contrary, by keeping the water a certain time heating, without boiling, the meat swells, becomes tender, its fibres are dilated, and it yields a quantity of *scum*, which must be taken off as soon as it appears.

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*In the price current from which this list is taken, there is a blank for the price of shares in the Erewash canal. This blank is filled up from a former price current, and the rate is very low, considering the high dividend of 58 per cent.

*We tried to make catsup of these by treating them like mushrooms, but did not succeed.

It is not till after a good half hour's hot infusion, that we may mend the fire, and make the pot boil; still continue to remove the *scum*, and when no more appears, put in the vegetables, &c. and a little salt. These will cause more *scum* to rise, which must be taken off immediately; then cover the pot very closely, and place it at a proper distance from the fire, where it will boil very gently and equally, and by no means fast.

By *quick and strong boiling* the volatile and finest parts of the ingredients are evaporated, and fly off with the steam, and the coarser parts are rendered soluble—so you lose the good and get the bad.

Soups will generally take from *three* to *six* hours.

Prepare your broths and soups the *evening before you want them.* This will give you more time to attend to the rest of your dinner the next day; and when the soup is cold the *fat* may be much more easily removed from the surface of it: when you decant it, take care not to disturb the settlings at the bottom of the vessel, which are so fine that they will escape through a sieve, or even through a tammis, which is the best strainer; the soups appear smoother and finer, and it is much cleaner than any sieve. *If you strain it while it is hot,* pass it through a clean tammis or napkin previously soaked in cold water; the coldness of this will coagulate the fat, and only suffer the pure broth to pass through.

The full flavour of the ingredients can only be extracted by very long and slow simmering; during which. *take care to prevent evaporation by covering the pot as close as possible.* The best stewpot is a *digester.*

Clear soups must be perfectly transparent; *thickened soups*, about the consistence of rich cream—and remember, that *thickened soups require nearly double the quantity of seasoning.* The *piquance* of spice, &c. is as much blunted by the flour and butter, as the spirit of rum is by the addition of sugar and acid; so they are less salubrious, without being more savoury—from the additional quantity of spice, &c. that is smuggled into the stomach.

To thicken and give body to soups and sauces, the following materials are used—they must be gradually mixed with the soup, till thoroughly incorporated with it; and it should have at least half an hour's gentle simmering after: if it is at all lumpy, pass it through a tammis or a fine sieve. Bread raspings, bread, isinglass, potato mucilage, fat skimmings and flour, or flour and butter, or flour; barley, rice, or oatmeal and water rubbed well together.

[*Cooks' Oracle.*

MISCELLANEOUS.

Bulletin No. 8, *August*, 1824.

[Ann Mâretimes, 1823, vol. ii. page 517]

ON THE METHOD OF RESTORING WINES WHICH HAVE TURNED.

Mr. Breton, professor of chemistry to the faculty of sciences, has given the following observations relative to wines which are on the turn. Wines, after they acquire a certain age, are subject to a decomposition, which is called by the cultivator the turn. The colouring matter assumes a violet, or almost black colour; the wine acquires a disagreeable flavour and odour. and loses its transparency; the scum (*ecume*,) which is produced in shaking it, is no longer red: it has been ascertained by an analysis, that it is composed of sub-carbonate of potash, at the expense of the cream of tartar and of the colouring matter, naturally an inherent property of the wine. If a little tartaric acid is added to this liquid in its state of decomposition, the acid immediately takes possession of the potash, it disengages the carbonic acid, the cream of tartar is precipitated, and the wine resumes its natural flavour and smell. The experiments which have been made on many hundreds of hectolitres, of wine, which was turned, determine the proportions to be an half ounce of tartaric acid for each hectolitre of wine; which, however, should be a little increased, if the decomposition had for some time previous taken place.—This method is intended to apply to such wines only as have been turned less than a year.

Bulletin No. 4, *April*, 1824..

[Preus Monatsblatt, April, 1823, page 86.]

ON THE BARRENNESS OF FRUIT TREES.

The barrenness of certain kinds of fruit trees, such as apple and pear, is the subject of frequent observation, the cause of which, however, is unknown to us. M. Schultze, director of the Potsdam garden, offers, in relation to this subject, the following result of his investigations. It is well known to those engaged in the cultivation of fruit trees, that the grafts do not always succeed; thus rendering it necessary to regraft the ensuing year. The grafts are frequently taken from the cuttings of young and newly grafted trees, and this is the principal cause of unproductiveness in such as are grafted with scions from young trees. Grafts which are taken from young trees and such as have not borne fruit, are not to be depended on; as all kinds of fruits are apt to degenerate; and as you cannot rely on a reproduction of a precisely similar kind from seed, recourse must be had to a propagation by grafts taken from fruit-bearing trees. As the graft, however, can only communicate its own peculiar properties, and *only* such as it possesses, it follows of course, that a tree which has not borne fruit, or which has not attained a proper growth to produce, cannot give as good grafts as fruit-bearing trees. whose determinate qualities are already established. A striking instance of this may be observed in the languishing condition of plants which are raised from seeds which have not attained a perfect maturity. It seems to be a general law of nature, as well in the vegetable as in the animal kingdom, that individuals which have not arrived at a proper growth, are not to be selected for reproduction.

ON THE CULTURE OF CÆSAREAN KALE.

The culture of this variety, (Cæsarean kale,) makes every day greater progress, (is coming every day more into notice,) and on all occasions proves, that it is not injured by being planted with other vegetables. In winter, when all other green food fails, this species of cabbage, which is from four to six feet high, gives a great abundance and lasts a long time. The large leaves are to be cut for cattle, a new growth takes place even during the winter. In the spring, when all other vegetables are scarce, this plant furnishes a great quantity of buds, which are delicious, and are not surpassed by asparagus. The leaves are also excellent nourishment for sheep, particularly for such as give milk during the winter. The seeds should be sown in the spring, or at the commencement of summer; before the plants get too large, they should be planted out at the distance of two feet—they succeed very well with turnips.

ECLIPSE AGAINST THE WORLD.

We are extremely glad to learn that Eclipse, the finest horse in this country or perhaps in the world, is, after all, to remain with us. An arrangement was made to send him to Virginia, and on the point of being concluded, when Messrs. Stevens and Livingston purchased him at the price of $10,000. This is as it should be. Eclipse would have been a loss to the states of New York and New Jersey, that would have been difficult, if not impossible to repair. His symmetry, size and strength, will insure to us a breed of horses invaluable for either harness or saddle: and experiments have long since proved that blooded horses are best for almost every purpose, to which this most useful and most beautiful animal can be applied. It has been ascertained that they will beat even the large cart horse under weights. The same gentlemen have also purchased his celebrated competitor Henry, whose race last year over the Union course, has given him a celebrity as justly deserved as the performance was unparalleled. They are both now at Hoboken in the same stable, with every prospect of becoming friends, and remaining so for the rest of their lives, which, we hope, may prove long; as well for the sake of the country as for the sake of the gentlemen who have risked so much to improve and preserve our stock.—*N. Y. Even. Post.*

CRUELTY TO ANIMALS.

The late English papers are filled with reports of prosecutions against offenders under a late statute for preventing cruelty to animals, and essays upon the subject, from one of the latter of which we extract the following sensible paragraph:

"I once knew a *traveller* for a house of great trade in the city, who deemed himself singularly fortunate in possessing a *horse* during many years, of ample strength to carry his weight, and to treat lightly any stretch of labour on extraordinary occasions. Both himself and his horse were intimately acquainted with each other; the rider would rely upon his beast for any hasty effort, and the beast was well assured that he was never urged except on some rare necessity. He always knew, that however diligent he was on the level, his breath was spared up-hill; his knees were protected down-hill; that he had never brought his master to an inn, but he stood by while his legs and feet were washed, his shoes fastened, his stall well littered, and his rack and manger well supplied. Thus, notwithstanding all his constant work, Scamper never saw his master enter the stable in the morning, but he greeted him with a neigh of his breath, and a paw of his feet; and, after tasting the strength of a comfortable breakfast, sometimes with his corn tossed into a pint of ale, each of these affectionate friends was always in good humour to pursue his journey; and if a pack of hounds in full cry should happen to skirt the wood of a distant covert, neither of them felt any displeasure, at leaving the dusty road, and joining the sport. It happened however, that the traveller came at last to the end of his journey; he died respected and lamented by every friend who knew him, and poor Scamper was sold to a relation who had seen his merit, at three times the price of his first cost. I need not comment on the reverse. This was the result of kind treatment, and it was no more than justly due to his honest exertions. Humanity, like honesty, is the best policy in man: it is the vital principle of that we profess."

UNIVERSITY OF VIRGINIA.

Monday, the third instant, was the appointed day for the meeting of the visitors of this institution. Messrs. Jefferson, Madison, Johnson, Cabell, Breckenridge, Cocke and Loyall, were all present, forming a full quorum. They have continued their deliberations from day to day, and are engaged in anxious investigation of the affairs of the University. Many subjects of importance have been suggested for the consideration of the board. and we have no doubt that consequences highly beneficial will result from their late session,

[*Central Gaz.*

SPORTING OLIO.

ON THE LENGTH OF GUN BARRELS.

Mr. Skinner, *Frederick county, Md. Oct.* 8, 1825.

As I am a constant reader of the "American Farmer," I have observed your publication from the "Annals of Sporting," on the length of gun barrels, as well as the remarks of some gentleman dated from Claverash, on the same subject. Now as I have been all my life fond of the sports of the field, and have devoted much of my time in making experiments with guns, I trust I shall be pardoned if I claim the privilege of a few remarks; but as I have never yet "shot a ball through the blade of a broad axe," or been much in the habit of using a long gun, I doubt whether the young sportsman will consider them worthy his notice.

With respect to the "length of gun barrels," I do not altogether disagree with the gentleman who owned "the Queen Ann musket," but we have followed different kinds of game, and that too at very different periods. Of one thing however I am satisfied, that the maximum has hitherto defied the art of the gunsmith.

The best method I have ever tried to ascertain the force and regularity of a gun's shooting, is, to place three quires of brown paper against a door, (an iron door is preferable) say, at the distance of 40 yards. The best barrel will pierce the greatest number of sheets, and plant her shot with the most regularity in the paper, at nearly equal distances from the centre. To do this—she must have a considerable substance and uniformity in the quality of the metal. A very light barrel rarely shoots well; she will throw her shot irregularly, and often plant as many as a dozen or more shot, in one hole. This is called clustering her shot.—Fig. 1. will represent the shooting of a gun of this description at a sheet of paper. Fig. 2. a barrel of the best quality Hence it is that a very light barrel is often said to be a good barrel, because she has happened to kill a bird at an extraordinary distance, by clustering her shot. If the metal is not uniform in quality it will produce the same effect. A very short barrel will certainly scatter her shot too much to kill a bird at any distance beyond 35 paces, although I believe that some barrels may be reduced to the shortness of 2 feet 2 inches, (especially if she has substance enough,) without injuring the power of impulsion.

Fig. 1.

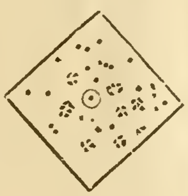
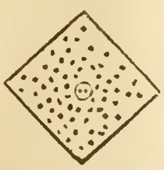


Fig. 2.



I imagine that barrels of late years have been reduced in length, and increased in the size of the bore, because it is found that upwards of three-fourths of the birds, are killed within the distance of 30 yards. Thus, by shortening the barrel, the sportsman can draw a quicker sight, and it gives him a greater chance of killing his bird, if he happens to be an indifferent shot. I would by no means advise young sportsmen to use such guns. They are not only dangerous in the field—but will assuredly be the cause of contracting a careless habit of shooting. We will suppose a bird to spring at the distance of fifteen paces from the shooter, and he finds it drop, although conscious that at the time he pulled the trigger, he did not aim within a foot of it.

The best barrels I have ever seen carried from thirty-two to thirty-six balls to the pound, and from thirty-three to thirty-six inches in length: and here, I would recommend all sportsmen to carry as much substance as their strength will justify. I have not time at present to assign my reasons, but they must be obvious to the experienced. I have often convinced my shooting companions, the advocates for short barrels, that nothing short of thirty-three inches would do, when on the mountains, in the month of October, and grouse and blackcock wild.

When buck shot are used, I would prefer a bore of 7-8 of an inch; she will bed the shot; which is absolutely necessary. If you increase the bore, and give the barrel its due proportion of metal, it becomes too unwieldly, and, in my opinion, it is an extravagant waste of powder and shot, and is only used to advantage in shooting at wild ducks, &c. where a person is stationary. My life on it, I can convince any man of his mistake, who will follow me in the field all day. I must drop the subject at present. It gives me pleasure to perceive that you take an interest in encouraging this sport. It surely is a healthful and gentlemanly amusement; and if my aid and experience can be of any service, it will at all times be cheerfully rendered by

Your obedient servant,
SAM. WOODCOCK.

[The contributions of our friend S. Woodcock to the sporting olio, will always be thankfully received by us and our readers.]

New-Market Races.

The races commenced on Tuesday last.—The sweepstake purse on that day, was won by Mr. Theo. Field's bay colt *Gohanna,* beating Dr. Cutler's sorrel colt *Rob Roy,* at two heats. Two fillies were drawn. The course, owing to several showers of rain on Monday, was very wet, and the heat uncommon for the time of year.

On Wednesday four started for the proprietor's purse of $300, three mile heats, viz: Mr. Harrison's b. f. *Betsey Robinson,* Mr. Feild's b. h. *Bertrand,* Mr. Johnson's s. h. *Janus,* and Mr. Minge's b. h. *Doctor,* and won by the first named with great ease. Doctor stumbled and threw his rider in the last mile of the first heat, and was in consequence drawn.

Yesterday, the jockey club purse of $700, four mile heats, was contended for and won at two heats by Mr. Tillory's horse *Marion,* beating Mr. Johnson's horse *Washington,* and Mr. Harrison's mare *Mary Cobbs.*

Washington Jockey Club Races.

Thursday Oct. 20.

The race of yesterday, four mile heats, for a purse of $300, was won by Doctor Thornton's *Southern Eclipse*—the running as follows:

Dr. Thornton's Southern Eclipse, . . .	1	1
Col. Sewall's colt, Tickler, ...	2	2
Mr. Van Swearingen's Hickory, . . .	dist.	

RECIPES.

TO MAKE FOUR QUARTERN LOAVES FOR FAMILY USE.

Procure a peck of flour, with which mix a handful of salt to three quarts of water, and add half a pint of good fresh yeast. Work the whole well together, and set it to rise at a moderate distance from the fire, from two to three hours. Then divide it into four equal parts, put it into tins, and send it to the baker's.

The London bakers, to give their flour a factitious whiteness, boil alum in the water; but such means will not be resorted to in any private family.

BURNS AND SCALDS.

Mr Cleghorn, a brewer in Edinburgh, has treated burns and scalds with success, by applying, in the first place, vinegar, until the pain abates; secondly, an emollient poultice; and thirdly, as soon as any secretion of matter or watery fluid appears, by covering the sore with powdered chalk.

Liniment for the same.

Take of linseed, or olive oil.
lime water, each equal parts,
or 3 ounces, by measure;
Mix, by shaking them together.

This liniment is extremely useful in cases of scalds or burns, being singularly efficacious in preventing, if applied in time, the inflammation subsequent to these; or even in removing it after it has come on.

INDIAN CURE FOR THE EAR ACHE.

Take a piece of the lean of mutton, about the size of a large walnut, put it into the fire, and burn it for some time, till it becomes reduced almost to a cinder; then put it into a piece of clean rag, and squeeze it until some moisture is expressed, which must be dropped into the ear as hot as the patient can bear it.

TO REMOVE GREASE SPOTS FROM PAPER.

Let the paper stained with grease, wax, oil, or any other fat body, be gently warmed, taking out as much as possible of it, by blotting paper. Dip a small brush in the essential oil of well-rectified spirits of turpentine, heated almost to ebullition, (for when cold it acts very weakly;) and draw it gently over both sides of the paper, which must be carefully kept warm. Let this operation be repeated as many times as the quantity of the fat body, imbibed by the paper, or the thickness of the paper, may render necessary. When the greasy substance is removed, to restore the paper to its former whiteness, dip another brush in highly rectified spirit of wine, and draw it in like manner, over the place; and particularly around the edges, to remove the border that would still present a stain. If the process has been employed on a part, written on with common ink, or printed with printer's ink, it will experience no alteration.

TO CLEAN BLACK SILKS.

To bullock's gall, add boiling water sufficient to make it warm, and with a clean sponge, rub the silk well on both sides, squeeze it well out, and proceed again in like manner. Rinse it in spring water, and change the water till perfectly clean, dry it in the air, and pin it out on a table; but first dip the sponge in glue-water, and rub it on the wrong side; then dry it before a fire.

TO TAKE STAINS OUT OF SILK.

Mix together in a phial, 2 oz. of essence of lemon, 1 oz. of oil of turpentine.

Grease and other spots in silks, are to be rubbed gently with a linen rag dipped in the above composition.

TO PRESERVE HOUSES FROM VERMIN.

Bugs, in particular, may readily be destroyed by dissolving half a drachm of corrosive sublimate, in a quarter of an ounce of spirit of salts, mixing it with one quart of spirit of turpentine. Shake these well together, dip a brush in it, and wash those places where bugs are supposed to resort: this will remove them to a greater certainty than any other mode now practised.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 21, 1825.

Mr. John S. Skinner,

Sir,—As our friend Curwen and myself have not been so fortunate as to convince each other of being in error, on the subject of Alderneys, I cheerfully refer the matter to our next meeting at "my fireside," when I hope to be more successful in a verbal, than I appear to have been in a written discussion. Yours, respectfully,

HENRY THOMPSON.

Baltimore county, Oct. 17, 1825.

General Lafayette.—In the memoranda of requests with which the editor of the American Farmer, was honoured by his respected and good friend General Lafayette; there is one that will depend for its fulfilment on the kindness of his subscribers. It was the desire of the General to be supplied with a sample of all the varieties of our Indian corn, *in the ear.* He requests therefore, the favour of one or two ears, such as may be deemed, in any particular, curious or uncommon. This request is put forth now, that it may be borne in mind at "husking time," and members of Congress coming to Washington, and of the Legislature to Annapolis, will afford good opportunities of sending them where earlier ones do not offer.

☞Be it remembered, that the Maryland Agricultural Society for the Eastern Shore, will hold their next Exhibition at Easton, on Thursday, Friday and Saturday, the third, fourth and fifth days of November.

The steam-boat Maryland will leave here on Wednesday morning, at 7 o'clock, and arrive at Easton about sunset—taking Annapolis in the way. She will return on Sunday after the show, and thus afford a good opportunity for those who have leisure, to pay a visit to a most beautiful and most hospitable part of the state. The steam-boat company, in a spirit that deserves commendation, have liberally consented to transport, free of expense, animals going to be exhibited for premium and sale, where they are accompanied by their owners. This regulation encourages the interchange of agricultural information, and the dissemination of *good blood*, in more ways than one. If we cannot find leisure to go, we shall envy those who are more fortunate.

The Union Agricultural Society, at their regular meeting in Darien, Geo., on the 12th of May last, by unanimous consent, appointed J. S. Skinner an honorary member of the society.

☞ It appears to be very desirable that droves of stock cattle should be brought nearer to our market, and it is believed that might easily be accomplished if some assurance could be given that they would here find a market. It is confidently believed by those with whom we have conversed on this subject, that three hundred lean cattle might be sold here this autumn; and if there happened to be a surplus beyond the demand, at fair prices, the residue might, it has been well suggested, be sent to the Deer Creek settlement, to the vicinity of Philadelphia, and other intermediate markets. It would be well for gentlemen who are in the habit of buying such cattle, to leave their names with the editor of the American Farmer, and the number that they would probably want. Should this arrangement be favored by the drovers, it is believed that from five hundred to one thousand head, might be sold here every autumn. The names of eight or ten gentlemen occur to us at once, who, we believe, would purchase two hundred and fifty head, but we have not leave to use their names.

☞A subscriber residing in N. Carolina, wishes us to ask what kind of wheat is best adapted to a low swamp soil? Is it best to sow on a bed of grass and weeds, or on ground clear of vegetation? Is there any difference in the time of sowing red and white wheat, and if any, what?

The same correspondent adds, "Our corn crops are much injured in this section of country by the drought; perhaps two-thirds of a crop is as much as can be expected. This and the small quantity of ground planted in corn, in consequence of the extensive cotton crops, gives us some reason to expect a scarcity of the article next season.

Extraordinary Produce.—T. P. Bennett Esq. of Talbot county, sent to the office of the American Farmer, two hundred and eighty-three stalks of wheat, which were the product of *four grains*, viz: 66 from one, 69 from a second, 71 from the third and 77 from the fourth; being an average of seventy stalks to each grain.

Large Egg-Plant.—An egg-plant, from the garden of H. Thompson, Esq., was lately deposited in the office of the American Farmer, which measured 24½ inches round.

☞Maryland Cotton.—A sample of beautiful cotton, the growth of "early black seed," planted at Bloomsbury, the residence of H. V. Somerville, Esq., near this city, on the 24th May, and gathered on the 4th October, was last week left with the Editor of the American Farmer, to be distributed to the Trustees of the Maryland Agricultural Society.

Maryland Tobacco.—A sale was made last week of 83 hogsheads, being *part* of the crop of Benjamin Oden, Esq., Prince George's county. This parcel consisted of crop and seconds, averaged 900 lbs. each hogshead, and was sold at $12 round.

It was nearly all unfired. We understand this gentleman obtained an average of $11.28 for his whole crop.

Dear Sir, *Charleston, Sept.* 17, 1825.

Perceiving by your last number, you had not seen the Tannier Plant, I send you a sketch of the leaf and flower.' When they are fit to be gathered I will send you some of the eating roots and seed; perhaps they may succeed with you.

J. MIDDLETON, Jr.

Tobacco.—Amount of inspections in the three state warehouses, during the last week—150 hhds.

WANTS A SITUATION AS A GARDENER,

For the ensuing year, a middle aged man, who has been regularly bred to the business, and is particularly acquainted with the culture of a vegetable or culinary garden, and the rearing of fruit trees. His wife would also superintend a dairy, in the management of which she can produce testimonials of superior skill. For further information, inquire at the office of the American Farmer. *October* 17.

CONTENTS OF THIS NUMBER.

Description of Peter Lossing's Lime Kiln, with cuts—Henry Watson in reply to Messrs. Hurlbert & Co. on Devon Cattle—Answer to certain Inquiries about Cotton—Robert Sinclair on the management of Fruit trees—Address to the citizens of Pennsylvania on Internal Improvement, continued—Rudiments of Cookery, soups and broths—Method of restoring Wines—On the barrenness of Fruit Trees—On the culture of Cæsarean Kale—Eclipse against the World—Cruelty to Animals—University of Virginia—On the Length of Gun-barrels—New Market Races—Recipes—Henry Thompson to Curwen—Editorial—Advertisement—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9 00	10 00		
BACON, and Hams, . .	lb.	7	10	11	
COFFEE, W.I. Green, .	—	18	19	20	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	20	23		
Georgia Upland, . . .	—	16	18		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	7	10	12	15
FEATHERS, Live, . . .	—	33	35	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	3 25	
Shad, trimmed,	—	6			
FLAXSEED, Rough, . .	bush	1	1 13		
FLOUR, Superfine, city,	bbl.	5 00	5 50	6 00	6 75
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	4 50	4 75	none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	53	55		
Wheat, Family Flour,	—	1 05	1 15		
do. Lawler, ...	—	92	1 00		
do. Red, ...	—	95	1 00		
Buckwheat, ...	—	55	75		none
Rye, ...	—	55			
Barley, ...	—	70	75		
Clover Seed, Red . .	—	5 00	5 50	6 00	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25	2 50		
Oats, ...	—	32	35		
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1 50	1 62		
HEMP, Russia, clean, .	ton	200			
HOPS, ...	lb.	28	30		
HOGS' LARD, ...	—	10	11	12	
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	23	25		
MOLASSES, W. India,	gal.	34	40		50
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	6½	7	8	9
NAVAL STORES, Tar,	bbl.	2 25			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2	2 12		
OIL, Whale, common, .	gal.	27	30		
Linseed, ...	—	80	82		
PORK, Baltimore Mess,	bbl	14 50		15 50	
do. Prime, . . .	—	10 50		12 00	
PLASTER, cargo price,	ton.	5 37	5 50		
POTATOES, ...	bush	75	1 00		
RICE, fresh, ...	c.lb.	3 25	3 50	5	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	28	30	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	34		50	
SUGARS, Havana White,	c.lb.	13 00	14 00	15 00	16 00
do. Brown, . .	—	11 00	11 50		
Louisiana, ...	—	10	11 00	11 50	12 50
Leaf, ...	lb.	19	22	20	22
Lump, ...	—	16	18	19	
SPICES, Cloves, ...	—	85	90	1 00	
Ginger, Ground, . . .	—	7	10		
Pepper, ...	—	18	19	25	
SALT, St. Ubes, ...	bush	40	42		
Ground Alum, ...	—	52		62	
SHOT, all sizes, ...	cwt.	9 50	10	12 50	
WINES, Madeira, L. P.	gal.	2 00	2 50	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20	1 50	1 75
Claret, ...	doz.	3	8		
Port, first quality, . .	gal.	2 00		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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AGRICULTURE.

ON IRRIGATION.

Water is employed in various ways for the improvement of land. 1. By the process of what is strictly called *irrigation,* when water is made to trickle over the surface. 2. By *flooding,* when it covers the soil completely, for a period of time; and, 3. By *warping,* when the water acts merely as a conductor of the *warp* or mud; by which the improvement is effected. We shall consider these several processes separately, beginning with irrigation.

This subject embraces the following particulars: The objects to which irrigation is applied; the methods of conducting the process; the circumstances necessary to be considered previous to the plan being undertaken; the waters best calculated for that purpose; the proper soils and subsoils for irrigated meadows; the effects of climate on irrigation; the profit; the grasses best adapted for water meadows; the stock fed upon them; the making and preserving water-meadow hay; the objections which have been urged against irrigation; the advantages attending it; and the improvements of which it is susceptible.

I. *The Objects of Irrigation.*

It is generally supposed, that watering land is only calculated for the purpose of encouraging the production of grass; but irrigation is likewise applicable to the culture of grain, and has even been made use of for promoting the growth of timber.

1. *Grass.* There are four modes by which water promotes the melioration of grass lands. It preserves a favourable degree of temperature; improves the crop, by the nourishing substances it conveys; destroys heaths and other weeds, which delight in a dry soil; and, as a mere element it is beneficial, more especially in dry seasons.*

Water, as a carrier, likewise conveys other substances to the soil, by which it is enriched. This is, obviously, the case when land is irrigated by muddy waters, which leave behind them rich mould and other substances. If lime or marl be held in the solution, the waters become highly enriching. Other soluble and nutritive substances are also capable of being conveyed by water in the same manner, on passing through fertile tracts.

Meadow plants, cut green, without any external moisture on their stalks or leaves, and afterwards dried, lose by exsiccation, from 66 to 70 parts out of 100. This very large proportion of moisture, (though water is perhaps not the only substance carried off,) is a direct proof, that water itself enters largely into the composition of these vegetables. Water is likewise of use, by the more equable diffusion of nutritive matter in the soil, which it necessarily occasions

The system of watering land, however, can never be carried to perfection, unless when accompanied by *drainage* and *enclosure.* Stagnant water and impetuous torrents, do essential injury; but if water is entirely under command, so that it may be laid on, or taken off at pleasure, it may become a most useful instrument, in the hands of a skilful husbandman. Drainage is therefore a necessary preparation for irrigation.†

With respect to enclosure, it can be of little real use to water lands, unless they are previously secured, by suitable fences, from poaching and trespass. Indeed, these are necessary, not only for the advantage of the grass, but for the safety of the stock, as sheep cannot be suffered to resort to lands flooded in summer, from the risk of rot.

2. *Corn.* In the East Indies, not only rice, but wheat and barley are raised by means of irrigation; and it has long been a practice in some parts of Scotland, to enrich the soil for crops of grain by the same means. Mr. Scrymsoure, of Tealing, a gentleman in Forfarshire, followed the practice for nearly fifty years, and with such success, that an enclosure, which had got into an exhausted state, was so enriched by it, that it preserved an uncommon degree of fertility for a succession of crops, (one of them wheat,) without fallow, lime or marl, and with very moderate assistance from dung.* The common method was very different. After watering for one or two seasons, they ploughed for oats, and by taking two or three successive crops, the soil was exhausted, and run out into weeds and poverty.† Nothing else could be expected from such management. But in other parts of Scotland, irrigation was not only practised with considerable success,‡ and for crops of grain, but immense quantities of wild oats, formerly prevalent, were completely extirpated, and for the destruction of which no other means were known, previous to the introduction of fallowing and of green crops.§ Water alone, however, without the addition of other substances, will not bring grain to perfection. Hence, though from year to year it may be applied to meadow and pasture grass with success, yet it cannot be repeated with advantage *to corn,* except at considerable intervals of time, or accompanied with manure.||

The system of irrigating for corn,** seems likewise to have succeeded in Somersetshire, where a large tract of country, suffered to remain in pasture for two years, was, during that time, at stated intervals, regularly flooded by a stream descending from the adjacent hills. It was then subjected to the following rotation of crops: 1. Wheat on the ley; 2. Turnips; and, 3. Barley, and artificial grasses. The produce of grain was very considerable; namely, of wheat from 40 to 50 bushels, and of barley from 50 to 60 bushels per statute acre.†† In a late publication on the utility of water-meadows, a question therefore is not improperly put, whether, upon particular soils, and under certain circumstances, irrigation might not produce similar effects upon wheat, and several other plants of the field and the garden, as upon herbage? The author adds, no good reason can be assigned, why this valuable improvement should be restricted to the cultivation of grasses.‡‡

But, on the whole, the improvement of grass, seems to be the great object to which the watering of land is applicable.

II. *The Methods of conducting the Process.*

Water-meadows are of two sorts: *flowing,* calculated for a flat country; and *catch-work,* for sloping grounds.

Flowing Meadows. Where the ground is flat, the soil is formed into *beds,* or broad ridges, like those met with at bleach-fields. They are commonly from 30 to 40 feet wide, and nine or ten poles in length; as in such situations, the great object is, when once brought on, to be able to carry off the water quickly. Hence it is necessary to throw up the land in high ridges, with drains between them. More of the failures in irrigation arise from the ridges not being sufficiently high, and the slopes not being sufficiently steep, than from any other cause.*

Catch-work Meadows. It is difficult to give an intelligible written description of the mode of making these meadows. To be properly understood, the operation must be seen. It may, however, in general be remarked, that the system is calculated for sloping grounds; and that after the water is brought from the original stream, into a new cut, it is stopped at the end, on as high a level as the case admits of, by which the water is made to fill the trench, and run over at the side, and flood the land below it. But as the water would soon cease to run equally, and would wash the land out in gutters, it has been found necessary to cut small parallel trenches, at the distance of from 20 to 30 feet, to *catch* the water again, (hence the name originated,) and the same plan of spreading, or diffusing, is continued, until the water reaches the main drain at the bottom of the meadow.† It is a great advantage attending the catch-work system, that it is not only less expensive, but the same quantity of water will do much more work.

In either of these ways, irrigation promotes the growth of grass. The herbage of dry land is impoverished from the want of water; that of wet land, by its remaining stagnant; but both these evils are remedied by the processes above described.

III. *Circumstances to be considered, previous to the Plan being undertaken.*

The first point to be ascertained is, whether there be a sufficient quantity of water at command. For want of due attention to this important circumstance, mistakes have sometimes been made, both in England and Scotland, extremely prejudicial to the advancement of irrigation.

The next objects are, the quality of the water, and the nature of the soil, and subsoil, of the land proposed to be irrigated.

It is then proper to consider *how,* and *where,* the water can be taken out of the stream. This can only be done by a proper level; and the assistance of a professed irrigator will be necessary.

Irrigation being an operation requiring considerable nicety and skill, cannot be advantageously conducted, without attentive hands to form the soil, to lay on and shift the water, and to remove it; also to cut down the produce, and to make it into hay. On all these accounts, a supply of trusty labourers for carrying on these several processes, must be provided.‡

IV. *Of the Water calculated for Irrigation.*

[This article, on irrigation, is copied from the third edition of Sir John Sinclair's "Code of Agriculture," presented by that great benefactor of the plough to the Editor of the American Farmer. The copy thus received is the more highly prized, as it contains some manuscript corrections and additions in the hand writing of the author. Amongst others, at this place he remarks: "*Quere—Vineyards, whether they should be irrigated?*"]

Clear spring-water, in the state in which it issues

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* See Dr. Singer's Treatise on Irrigation, in the General Report of Scotland, vol. ii. p. 574.—Derbyshire Report, vol. ii. p. 464.

† In preparing irrigated meadows, covered drains can never be safely resorted to, because the water would almost certainly get down into them, and destroy them; and in most instances, the ridges may be made sufficiently high and steep, to effect a sufficient drainage.—Derbyshire Report, vol. ii. p. 465.

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* Statistical Account of Scotland, vol. iv. p. 94.

† Ibid., vol. xv. p. 82. ‡ Ibid., vol. xvi. p. 471.

§ Aberdeenshire Report, p. 414.

|| Statistical Account of Scotland, vol. xv. p. 88.

** [By corn, it is known that English writers mean what we call small grain—they know nothing of Indian corn.]

†† Somerset Report, p. 266. This tract is on the demesne of Mr. Luttrel, of Dunster Castle.

‡‡ Observations on the Utility of Water-meadows, by William Smith, Engineer and Mineralogist. Printed an. 1806, p. 39. Marshall on Landed Property, p. 260, calls it a *probable improvement.* See also Derbyshire Report, vol. ii. p. 484. The late Duke of Bedford had it in view, to adopt this plan of temporary irrigation, for arable land. It has been found of great use, at Woburn Abbey, to irrigate strawberries.

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* Derbyshire Report, vol. ii. p. 459, and 466.

† Wiltshire Report p. 119.

‡ Communications by Mr. Boulton, a flooder, or floater, from Gloucestershire. General Report of Scotland, vol. ii. p. 596.

from the hills, (more especially where the strata are calcareous,) is certainly of a fertilizing quality. It is charged with a considerable quantity of vital air; near the source also, it is usually warmer than other waters, and thence it answers better for irrigation, more especially during severe weather in winter. From these properties, there is always produced, abundance of early succulent grass, for several yards where the water first runs over the land near the spring. Clear spring-water may also be used longer than the foul or muddy, being less apt to render the grass gritty and unwholesome; hence some give a decided preference to clean-watered crops.[*]

Mountain streamlets, fed principally by springs, are more at command than rivers, and more convenient to be directed over slopes, and are also better calculated for improving grass.

Where river water is accessible, it is commonly loaded with many enriching substances from the country, and the towns and villages through which it passes; and is thus productive, not only of temporary, but of permanent improvement.

Sea-water also, where it can be employed for that purpose in moderate quantities, or made use of within embanked marshes, is applicable to the purposes of irrigation. It contains, more especially near the land, not only animal and vegetable substances, but also saline mixtures in solution. The utility of salt marshes to diseased horses, and their acting as a restorative to sheep in danger of, or infected by that fatal malady, the rot, is well known. Those ideas are corroborated by an observation, that the meadows near the mouth of the Severn, *where salt water is spread over the lands by the tide*, are grazed, instead of being mown, and are accounted the best possible pasture for horses and cattle that require rest, and spring physic.[†]

In regard to waters much impregnated with iron, they were formerly supposed totally unfit for the purposes of irrigation; but it is now fully proved, by the accurate experiments of an able chymist, and by the extraordinary growth of grasses in Prisley meadow, in Bedfordshire, that ferruginous waters are friendly to vegetation, when properly applied.[‡] Chalybeate springs, however, or water impregnated with other mineral substances, as lead or copper, never does good; and it is well known, that waters of that description, after they have been brought into fields, by levels cut at a considerable expense, have again been diverted, and suffered to flow in their original channels.[§]

Waters that are impregnated with the juices that flow from peat-mosses, are considered by many, not worth applying to the soil.[||] It is objected to them, that they are soon frozen; that they convey no material nutriment; and that they are commonly loaded with such antiseptic substances, as will retard, instead of promoting vegetation.[**] It is urged, on the other hand, that a want of sufficient slope in the meadow, or of proper management in regard to the water, may have occasioned the disappointments experienced in some cases, when bog-waters have been applied.[††]

(*To be concluded in next number.*)

LOWER VIRGINIA.

Favourable change in its Agricultural condition, products, and prospects.

Extract of a letter from one of his friends to the Editor of the American Farmer—dated, 6th October, 1825.

The revival of lower Virginia is now looked upon as near at hand. You know what a depopulating tide of emigration has set from it to the west for the last 20 years. Many of its former inhabitants are now enterprising, respectable citizens of North Carolina, Tennessee, Alabama, Mississippi, Kentucky, Missouri, Indiana, Illinois, Michigan and Ohio. There is scarcely a neighbourhood in any of the *new states*, which has not some family from *old*[*] Virginia. Although the tide of emigration has been great from the tobacco and wheat portions of Virginia, yet its effects have been, in some measure, counteracted by emigrants from the district below tide water. The soil which produced the richest staples, and was most exempt from disease would naturally attract the densest population. As to climate, there is great room for speculation. It is thought questionable by many if the upper, has not, in this respect, been given too great an advantage over the lower country. No matter how the account may now stand, I am convinced that after judiciously expending some capital in removing local causes of disease, and bringing into cultivation the rich lands in the lower country, the balance will not remain so much in favour of the upper country. It will be ascertained this year, whether or not cotton may be relied on as a sure and profitable crop. Every indication that I have seen or heard of as to the present crop, is highly favourable. The small parcels cultivated heretofore, by a few individuals, have sufficiently established the *quality* of our cotton. To my mind it is now rendered certain that the cotton planter in lower Virginia, lacks nothing but confidence in the article, to be placed on a footing with the tobacco planter of the upper country. The difficulty of changing the habits of men; of inducing them to embark in *crops* or even *modes* of cultivation, never adopted by their *fathers*, has been always one of the most serious obstacles in disseminating agricultural improvements. Few men, unconscious of the *unlimited* range of science and intellect, can be made to believe that they can be taught any thing valuable in a pursuit which has engaged all their attention, and the attention of their fathers' fathers, for generations past. Many persons whose minds keep pace with the advancements of the sciences and mechanic arts, or who see and acknowledge the wonderful improvements of modern times, are loath to admit that the simple operation of ploughing or ditching can be improved. It is this attachment to old customs; this veneration for the ways of our ancestors; this resistance of innovation, that keeps so large a portion of our country in so rude a state, and so many of our people poor. To break down these prejudices by exhibiting the results of practical men, and diffusing the knowledge of improvement, is the great object of your valuable paper, the American Farmer. The prejudices to which I refer operate powerfully against its circulation, except with the most enlightened class of farmers. But the services you have already done to the cause of agriculture entitle you to the thanks of the whole country. Your labours will, it is hoped, daily assume more importance, and be rewarded in a manner more worthy of your zeal and industry.

Since the wretched policy of the government has cut off, in so great a degree, the markets of the West Indies, from the inhabitants of the corn section of our country, their labours have been but badly rewarded. They have had very poor markets for their corn; and their soil is not adapted to tobacco or wheat. Under these circumstances, if they apply their energies to the cotton culture, they will find it more profitable; and the article better suited to their soil than any thing else save Indian corn. The want of experience in raising the crop, will occasion some failures for a year or two. But it is hoped that the success of so many will encourage the balance to persevere, until they overcome the causes of failure. In this, as in almost every thing else connected with rural economy, the practical success of our neighbours, occurring under our immediate inspection, will go further than all the reasoning or essays that could be published. Next year I expect to see the culture of cotton quadrupled in Virginia. The increase will go on until all our lands, adapted to its growth, will be devoted to it. This is "a consummation most devoutly to be wished." Even if the price should fall 20 per cent below what it now is, it will then pay the planter a better profit than any thing else he can raise. The grain growers will profit by it; because there will be better prices for grain, and the markets will not be so often glutted. All other interests will be benefited, on the principle, that an addition to the revenue or the wealth of a numerous class of any society, is felt most sensibly in their transactions with the rest.

The prospects of our tobacco planters are more flattering than they have been for some years. Prices abroad are said to be "dangerously high," and the knowing ones think that they will be so far maintained that the planter may expect an ample remuneration for his toils. Thus we have two-thirds of Virginia at present cheered by unexampled *prospects* of agricultural prosperity. If we are not intoxicated, and call into action but a common share of prudence and energy, we may soon free ourselves of pecuniary embarrassments, and enter earnestly into extensive improvements. The renovation of lower Virginia, will be a most gratifying event. The numerous old mansions, venerable from their age, and from their having been once the seats of the generous, the hospitable, the patriotic of our land, are destined to be repeopled. The mouldering churches which have so long afforded subjects of melancholy reflection to the passing traveller, are again to echo with the praises of the living God, uttered by a religious and enlightened people. The sparse and meritorious population of lower Virginia, who have resisted the rage for emigration, are to have the chasms in their society filled up—their country is again to prosper—God grant that these may not be ideal visions!

Think not that I am an enthusiast, or that I first drew the breath of life on the tide water margin of some of our noble rivers. Not so—I am a mountaineer, and never have lived below the head of tide water. But yet I am not insensible to the advantages of that country, nor to its numerous enjoyments. Some revolution in *events* must make it the garden of our state. I think I see that revolution approaching. The fertility and cheapness of lands in the West, and the idea of a more salubrious clime, deprived it of most of its young and enterprising population—the old have been cut off by the scythe of time. It is now found that sickness visits alike the margin of the marsh and the valley of the mountain; and the love of *gain*, may I not say, of pleasure, will gather again on our Atlantic border a dense and active population. What is to prevent it? Will fine lands, productive of the richest staple—noble rivers, bays, &c. affording all the facilities of commerce—every advantage—with a climate, the finest in the Union for nine months of the year, and even for the other three, with prudence, not half as deleterious as imagined—with these advantages what can prevent the revival of lower Virginia?

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[*] Smith's Observations, pp. 68 and 71.

[†] Gloucestershire Report, p. 165.

[‡] Smith's Observations on Irrigation, p. 28.

[§] Remark by the Rev. Robert Hoblyn.

[||] These waters generally hold in solution, a portion of oxide of iron, commonly called "*green vitriol*," supposed to be a preventive of the rot, as sheep in the Cambridgeshire fens, where that substance abounds, never take that disease.

[**] Dr. Stringer's Treatise, p. 579.

[††] Derbyshire Report, vol ii. p. 463.

[*] Old and New Virginia were the terms by which the parts of the country *below* and *above* the mountains were designated.

SPONTANEOUS COMBUSTION.

J. S. Skinner, Esq. *Brandywine, Sept.* 6, 1825.

An extraordinary phenomenon has occurred a few miles from this place, which caused such a rumour as induced me to visit the place and ascertain the facts that caused it; and in order to inform the farming interest I now forward some of the particulars.

William Painter, a farmer in the neighbourhood of Brandywine, Delaware county, Pennsylvania, having harvested his crops of hay and grain, and filled a large barn with the product at the usual time; one bay or mow of hay contained about *sixty tons*, and on the 4th of the present month, which was about three months after being in the barn, he discovered strong symptoms of *fire* in the large mass of hay. He had known of its being very warm, time past, (not uncommon in such cases,) but lately a black smoke had issued from a certain spot of the mow, about midway but near to the floor, from whence it had been pitched in, being more compacted by the treading of those who had stowed it away. The whole depth of hay was thirty-two feet, being a two story barn, containing upwards of a thousand dozen of wheat, as well as hay.

It gave alarm to the neighbours who volunteered their services to the number of about sixty hands. They had several hogsheads filled with water taken into the threshing-floor, and kept in readiness to apply, as need might require. They cut round the heated part, and removed about *twenty tons* that was not materially injured, still keeping the focus of heat for their centre. The removal of the quantity aforesaid, brought them to the *sample enclosed*,* completely charred, or carbonated, as I supposed when I took it from the heap hauled out in the field; but, on close examination since, I found my mistake, the carbonated part was broken up fine in handling. This specimen has the pyroligneous acid yet retained, as it had not yet escaped, being cooled in moving, [very discoverable to the taste;] but there was about *ten tons* drawn out into the field as useless, except for manure, the greater portion of it *carbonated completely*, the cattle ate it freely, but it had a scowering effect on them.

This focus of heat had concentrated into about eight feet diameter, as appeared by the effect; beginning within a foot or two of the bottom, and rising perpendicularly about fifteen feet, leaving the part on which the heat had fully operated, (eight feet diameter,) carbonated, and was yet on its progress upward, when stopped by moving the confinement above. The greatest danger appeared when they began to disturb the carbonated part, as sparks of fire, frequently appeared by admitting the atmospheric air to it while it remained so heated; it seemed that all that was wanting to have made a general conflagration of the barn and all its contents, was a sufficiency of air.

But timely application of water on every appearance of ignition, had the desired effect. It had an alarming appearance to see fire sparkling in the middle of a large barn, filled with so much combustible matter, and the men in the midst of it.

The owner informed me that putting in a few wagon loads of the first of his crop, on a drizzling or wet day, in the bottom of that mow, he thought caused the extraordinary heat, or at least commenced the business. It might be worth observing this as a precaution, as rain water is abundantly more injurious to hay, than the same quantity of moisture from its own juices—independent of the danger of generating fire. C. KIRK.

P. S. I saw the most simple and efficient machine for taking out grain, in the barn above noted, that has ever come under my observation. When I can take a more full view and see it work, shall give a further account and description of it.—C. K.

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* Which may be seen at the office of the American Farmer, by any person curious to examine it.—Edit.

SAINFOIN.

Augusta county, Va., Oct. 21st, 1825.

Mr. John S. Skinner,

Sir,—I wish to obtain information, through the medium of your very valuable paper, whether there is such a grass to be had in this country as the Sainfoin. I never heard of such a grass until I saw an account of it in a work published by Mr. Spurrier, who was a celebrated English farmer. It must certainly be one of the most valuable grasses that the farmer could possibly have. If such a grass could be procured in England, it would be well worthy the attention of our farmers to procure it.—It grows to the height of six feet, and the roots penetrate to the depth of fifteen and twenty feet. This would appear almost incredible to us, who are strangers to it. I hope the necessary inquiry will be made, to obtain, if possible, this extraordinary and valuable grass.

I have the honour to be,
Yours, &c. VERITAS.

[The Sainfoin has been cultivated in America—some was brought from France, we believe, by Mr. Crawford. We hope to hear from some correspondent in reply to Veritas, and shall ourselves give an account of this grass, as it is known and esteemed in other countries.]

PENNSYLVANIA CATTLE SHOW.

The Exhibition of Cattle and Manufactures, held at Mount Pleasant, under the auspices and direction of the Pennsylvania Agricultural Society, terminated on Friday, and gave throughout, the highest satisfaction to the multitude of spectators who appeared on the ground. No better situation could have been chosen for the purpose, whether as to facility of access, or convenience and picturesque beauty It is calculated that four thousand persons were present on Thursday. The horses, horned cattle, hogs, &c. collected for the occasion, from no inconsiderable distances, are probably not surpassed, if equalled, in any part of the Union. Much attention was paid to the specimens of domestic manufactures also; and these likewise are fitted to excite admiration for the progress already made, and the most confident expectation of general improvement. A striking proof of the utility of such exhibitions is found in the deep interest which so large a number of respectable farmers take in them. They meet, not merely to view and study the breeds which they respectively possess, but to interchange ideas and facts upon all the branches of husbandry which they cultivate, and to establish an intercourse of business advantageous to all parties.

On Friday, ploughing matches took place and premiums were distributed. After which, the directors and members of the Society, along with several invited guests, sat down to an excellent dinner at the Red Lion tavern. Jonathan Roberts, President of the society, presided at the table; Mr. Powel, whose contingent to the exhibition was so valuable, and whose services as a member of the society are most important, was unfortunately obliged to return home in the morning, in consequence of a fall; from which, however, no serious consequences are apprehended. Various appropriate toasts were drunk, in the course of the repast, and samples of fine domestic wines circulated that did not diminish its zest.

Dr. Darlington, of Westchester, delivered, on the second day, an address, which afforded much gratification to his very numerous audience, and is likely to win the suffrages of the publick, when it shall be printed. [*Nat. Gaz.*

WORCESTER CATTLE SHOW.

The annual cattle show, ploughing match and exhibition of manufactures, took place at Worcester, (Mass.) on Wednesday, the 12th instant. The President of the United States had been expected, but did not attend. There was a great concourse of strangers, many of whom were delegates from other societies; and others were attracted by the reputation of the farmers of Worcester county. Colonel Pickering, who, although above 80 years of age, is one of the most active agriculturists of the state, was present.

In the department of manufactures, the carpets are highly spoken of, both as to their number and beauty. The broadcloths were few. Some beautiful flannels were exhibited, which were manufactured at Amesbury, Massachusetts. The first premiums, of $15 each, for the best broadcloth and the best carpeting, were given; the former to Mr. Thomas Botternly, of Leicester; and the latter to Mrs. Ethan Davis, of Holden. The second, of $10 each—the former to Slater & Howard, of Oxford, and the latter to Mrs. Gideon Delano, of New Braintree. The best premium for flannel was awarded to David Goodall, of Oakham, $10. Premiums to the amount of $10 were distributed amongst other competitors in the various branches of domestic manufactures.

About 160 neat cattle, and 134 sheep, and swine were exhibited. There was also a team of 78 yoke of working oxen, owned in Worcester, which were pronounced the best which had been exhibited there. A beautiful horse, Roman, belonging to Mr. Williams, was also exhibited.

Fifteen teams started in the ploughing match, which appears to have been well contested. Nearly $200 was distributed in premiums, besides those we have enumerated above.

It is supposed that the show of domestic manufactures would have been greater, but for the occurrence of the exhibition at Philadelphia nearly at the same time. [*Nat. Journal.*

SEA ISLAND COTTON CROP.

Report of the Beaufort Agricultural Society.

The Beaufort Agricultural Society, in order to ascertain the extent of the damage done to the cotton crop, on Port Royal and Paris islands, appointed committees to inquire into the same, within their several districts. They report as follows:

	Acres planted.	*Bags gathered in.*	*Bags expected.*	*Total.*
Wm. Elliot and Wm. J. Grayson, for Paris island . . .	796	104	56	160
Do. for Battery neck, Port Royal island	625	66	41	107
S. R. Perry and P. Givans, for the north section of P. R. island,	1198	64	50	114
E. Barnwell and S. Elliott, for the south section of P. R. island,	1087	55	58	113
J. Porter and M. Stuart, for the west section of P. R. island,	1027	61	67	128
For plantations on Port Royal, not reported, supposed to be	240			33
Total acres planted . , . .	4973			655
Including stained cotton, making an average of 39lbs per acre.				
Assuming the average of a good crop to be 125lbs per acre, the product would be				2072
Leaving a deficiency of bags				1417

MIDDLESEX AGRICULTURAL EXHIBITION.

The Middlesex Agricultural Exhibition was very gratifying. Sixty pens were filled with excellent cattle, sheep and swine. The strength of working oxen was tested by drawing heavy loads up a steep ascent, and the ploughing match was well contested. The Rev. Charles Briggs, of Lexington, delivered the oration. Col. Valentine declined a re-election to the office of President of the Society, and Rufus Hosmer, Esq., was elected to that office. Dr. Josiah Bartlett is Corresponding Secretary.

BRIDGEWATER CATTLE SHOW.

The Bridgewater Cattle Show, and Exhibition of manufactures and produce, has met an increased attention this year from the farmers of the county of Plymouth, who on the 5th instant, assembled at Bridgewater, at an early hour, to celebrate their yearly festival, and "harvest home."

INTERNAL IMPROVEMENT.

TO THE CITIZENS OF PENNSYLVANIA.

(Concluded from p. 245, American Farmer.)

With this answer we might remain content. But we are much more gratified to be able to say, as we can do with entire confidence, that such apprehensions are not well founded. Among the most strenuous opposers of the Erie canal were the proprietors of the great western turnpike, from Albany to Buffalo, who augured nothing less than the destruction of their property from this measure. The event has proved how grossly they were mistaken. The travelling has greatly increased—five times as many stages are run on the road—the heavy wagons which used to destroy it, have nearly all disappeared—the repairs are greatly diminished, and the dividends increased in the same proportion. Whatever gives activity to commercial intercourse, must multiply the use of roads. Neither can we believe that transportation by wagons, though its direction may be changed, will suffer diminution. Produce will be hauled to the canal, at different points, and it can be hauled from great distances. Such a communication, in its effects, is like a great navigable river, accessible throughout its whole course, and to which every avenue tends. It creates activity, instead of destroying it.

If, however, these apprehensions were better founded than they are, what would be the rational conclusion to be derived from them? It is no longer a question whether transportation from west to east, and from east to west, shall be by turnpike roads and wagons. That is already decided. The great rivers of the west are offering the most inviting facilities to a communication with the ocean by the south. On the north, the magnificent production of New York intelligence and enterprise, presents a navigable connection with the east. On our southern border, a new avenue is to be opened by the Ohio and Potomac. *It is not a question, therefore, whether Pennsylvania shall transfer the carriage from turnpike roads to a canal of her own, but the real question, and a most solemn one it must undoubtedly be deemed—is, whether Pennsylvania shall lose the carriage altogether?*

If in this amicable, and not unworthy rivalship that is to be maintained, Pennsylvania cannot approach nearer to the efforts of her neighbours than by roads and wagons, we pronounce distinctly that she cannot support the competition, and must yield up a large portion of her immense natural advantages to those enterprising neighbours.

It has been said, that this work, like the Union canal and the Schuylkill navigation, ought to be undertaken at the expense and risk of individuals. To this there are two strong objections. First: It is more than probable, that individual enterprise and capital commensurate with such an undertaking, could not be commanded. Secondly: The advantages are too numerous and important to be surrendered into the hands of any individuals. How calamitous would it not be to the state of New York, had she been so far misguided as to allow her canals to be executed by companies, who would monopolize their benefits in perpetuity! We trust Pennsylvania will never commit an error so hopeless of remedy. We trust she will never part with the sovereignty she holds over her majestic rivers, nor cede to any corporation, however guarded by legislative provisions, the power and right over the great means of intercourse between the east and the west, and between the north and the south. As state works, accomplished by state means, regulated by state laws, and interwoven with state interests, they will be the pride and boast of every Pennsylvanian. As links of a chain of adamant. they will bind every part of the commonwealth together; and as the common property of all, they will create and strengthen kindred feelings, and make our citizens a band of brothers, with no other rivalship than that which honest industry and enlightened patriotism will approve; with no other objects but the common good of all. Surrender to others the right to execute such works for individual emolument, and all these rich and grateful anticipations will be lost, and the means to attain them will be gone forever.

In this address, we have cautiously forborne to touch on rail roads as a medium of opening the proposed communication; not by any means because we are hostile to them, but because our information on the subject is not sufficiently matured to warrant us in forming a decisive opinion. From the various accounts published, in support of them in England, by their friends, they appear to have important advantages. Their advocates are so sanguine as to believe that they may ultimately supersede canals altogether. This is certainly very doubtful. Should they, however, be found, on a fair trial, to realize the anticipations formed of them, we hope and trust they will be preferred to canals, and none of our citizens will be more eager to secure that preference than those who now address you. It cannot be denied, if they prevent the necessity of the expensive and tedious operation of tunnelling, as their advocates assert, that they may be eminently serviceable as subsidiary to canals, in surmounting elevated regions where there is a scarcity of water.

We venture to suggest the following observations to the consideration of the public. There are, we apprehend, certain portions of the space on each side of the mountains, which are calculated for all the locations of the route which are contemplated. Arrangements might be made for commencing with these at once, as soon as surveys are made. We should thus gain time, and greatly accelerate the progress of this most important undertaking.

In reflecting on this grand subject, it ought to be borne in mind, that it is a work not merely for the present generation, but for remote posterity; that the canal will offer a direct communication with the whole of the countries watered by the magnificent lakes and waters of the west; that there is at present a steam-boat and a keel-boat navigation in that section of the United States, of 20,000 miles;* that its population more than doubles every ten years—for in 1820 it was 2,233,535 souls, whereas in 1810 it was only 1,022,604; that it scarcely contains less than 3,200,000 at present, and will probably contain above 4,000,000 in 1830; that a large portion of it nearly trebles its numbers in ten years; for the population of Alabama, Mississippi, Louisiana, Tennessee, Ohio, Indiana, Illinois, Missouri, Michigan and Arkansas, in 1810, was only 616,093, whereas in 1820, it was 1,669,336!* that the steam boats, which will transport the produce of a large portion of those countries to Pittsburg, stem the current of the rivers at the rate of 150 miles per day; and that such are the advantages of this important section of our country, such the fertility of its soil, and such the increase of its population and cultivation, that at no distant day it cannot fail to afford full employment for the New York, the Pennsylvania, and the Potomac and Ohio canals. The mind can hardly grasp the extent of the advantages which thus court our acceptance, and the splendour of the prospects which open to our view.

In the compass of an address, it cannot be allowed us to present for your consideration and estimate, all the advantages which will flow from the completion of a communication between the eastern waters and the Ohio and Lake Erie; nor could we expect your attention, were we to endeavour to answer every objection which might be stated to the undertaking. Some of the most prominent arguments in its favour, and a limited exhibition of the large benefits to be derived from it, we have represented to you; a few of the difficulties which have been alleged as interfering with its execution, we have attempted to remove or diminish. But it would be an imperfect execution of the honorable trust assigned to us by the Convention, were we to pass over two considerations, the influence of which we know is extensive with some of our most respectable fellow citizens. It is asserted that when a communication between the east and the west shall be made in the manner proposed, the markets of the Atlantic capitals will be glutted with the productions of agriculture; and, it is also said, that the value of property in the neighbourhood of those capitals, will be lessened, as the most distant regions will have a cheap access to them, and thus furnish those supplies, at a rate much lower than they can be afforded by those who have paid high prices for their farms, and expended large sums in the buildings erected on them.

The answers to the first objection have been furnished by experience, and are obtained from the soundest principles of political economy. Consumption will always be, and has always been, in proportion to supply. As the quantity of the necessaries and comforts of human life is increased, population has always increased, and will increase. Industry is promoted by plenty; new wants are created by it; and the means to gratify these wants are obtained by augmented exertions. Such has been the effect of internal improvements upon all the large cities in England, Scotland and Wales. It has been found in every one of them, that the number of their inhabitants has in most instances doubled, and in that of two or three has more than trebled since the introduction of turnpikes and canals. We must be allowed to refer to some facts in support of these positions. Manchester, in England, in 1773, contained 27,246 inhabitants; in 1824, it contained 163,888. Liverpool in 1760, before the Bridgewater canal was executed, contained 25,787 inhabitants; in 1824, it contained 135,000. London, in 1801, contained 900,000 souls; in 1821, its population was 1,225,963. Are we required, after these facts and the observations which precede them, to enter into reasoning for the purpose of proving that the lands in the neighbourhood of capitals will not be lessened in value by increasing the facilities of access to them? There will always be in large cities a constant demand for the productions of the neighbouring country, many of which cannot be supplied from a distance. The early bounties of spring, the gifts of the dairy, fruits and vegetables, hay and grass, will always be exclusively obtained from farms within short distances from the places of demand. Thus, therefore, the augmented population of the towns, will still secure and preserve to the neighbouring farmer the benefits he now enjoys from being in their vicinity, and will make him an equal participator in the rich results of the execution of the great state work we seek to have accomplished.

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* There are on the United States side of Lake Erie, at present, 56 vessels navigated by sails, of which the tonnage is about 2300 tons. They make about 25 trips in the year, generally fully loaded, so that their cargoes may amount to above 50,000 tons, but say only 40,000. The steam vessels, built and building, are five, of which the tonnage averages 210 tons. They will make about 50 trips in the year. If they carry only half cargoes, they will amount to about 25,000 tons annually. This will make an aggregate of 65,000 tons, which will be constantly and rapidly increasing, probably trebling or quadrupling, in four or five years.

* Alabama and Mississippi, in 1800, contained 8,856 inhabitants; in 1820, 219,756. Tennessee, in 1800, 105,602; in 1820, 422,613. Ohio, in 1800, 45,365; in 1820, 581,434. Louisiana, in 1810, 20,845; in 1820, 153,407. Indiana and Illinois, in 1810, 36,801; in 1820, 202,389. What stupendous views these facts open for reflection!

We regret the length of this address—and yet are obliged to omit many strong facts and cogent arguments in favour of an important measure, the success or failure of which cannot but produce most important consequences on the welfare and prosperity of our state, and greatly decide its future relative standing among its sisters, and in the world at large. We now submit the whole subject to the good sense and public spirit of Pennsylvania, fully satisfied that if that sense and spirit be called into activity, in any degree proportioned to the magnitude of the object in view, they cannot fail to produce a most felicitous result, and lead to scenes of prosperity and happiness, never exceeded in the annals of nations.

MATHEW CAREY,
of Philadelphia, Chairman.
JOHN KENNEDY,
of Fayette county.
S. D. INGHAM,
of Bucks county.
JACOB HOLGATE,
of Philadelphia county.
JOSEPH PATTERSON,
of Alleghany county.
PHILIP S. MARKLEY,
of Montgomery county
THOMAS H. SILL,
of Erie county.
JOHN FORSTER,
of Dauphin county.
THOMAS H BAIRD,
of Washington county.
Committee.

August 22, 1825.

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The following are the resolutions agreed to by the Harrisburg Convention, at its sessions of August 5th and 6th, 1825

Whereas, the great interests of the state of Pennsylvania require that there should be a steady perseverance in improving the resources of wealth, and strength, and social comfort, which abound within her limits: *And whereas,* the time has arrived when she is called upon by every consideration of regard for her character and standing, as well as for her permanent prosperity and happiness, to make a vigorous and united exertion for accomplishing, without delay, the connection of the Eastern and Western waters: *And whereas,* a distinct and solemn expression of the deliberate opinion of the people is always of powerful efficacy, and is especially fit and requisite upon an occasion like the present, where an extraordinary effort is necessary for the common advantage of the whole, the public will being the only sure authority for the undertaking, and the best pledge for its energetic and zealous prosecution: *Therefore,*

1. *Resolved,* That the improvement of the Commonwealth will be best promoted, and the foundations of her prosperity and happiness most securely established, by opening an entire and complete communication from the Susquehanna to the Alleghany and Ohio, and from the Alleghany to Lake Erie, by the nearest and best practicable route, and that such a work is indispensably necessary to maintain the character and standing of the state, and to preserve her strength and resources.

2. *Resolved,* That the application of the resources of the state to this undertaking, ought not to be regarded as an expenditure, but as a most beneficial investment; for its successful execution will increase the public wealth, improve the public revenue, and greatly enlarge the ability of the state to extend her aid to every quarter where it may be wanted, and at the same time will encourage industry, create circulation, extend trade and commerce, enhance the value of land and of agricultural and mineral products, and thereby augment the means of the citizen to promote his own and the public welfare, by contributions to similar works.

3. *Resolved,* That all local objects tending to a diffusive and unconnected application of the public means, ought, for the present, to yield, so as to allow an undivided exertion of the public strength in this great undertaking, which is essential to its speedy and successful prosecution. For though it be certain, that whatever may be its location, the benefit will be most sensibly felt, in the first instance, in the immediate neighbourhood; yet it is also true, that its invigorating influence will pervade every part of the commonwealth, and, in a short time, its branches will spread in all directions, wherever the bounty of Providence has furnished the means of access to the great channel thus improved; and, encouraged by this example, new channels will be successively opened, as occasion may offer, or the public exigencies and the demands of the country may require.

4. *Resolved,* That in our opinion, the people of Pennsylvania will fully sustain the legislature in all such measures as may be necessary for effectuating this highly important and interesting object; as we believe them to be fully sensible of its political and social value, and they have never refused to support, to the utmost of their ability, what their enlightened and patriotic judgment approved as fit to be done for the common good.

5. *Resolved,* That this convention regards with satisfaction, the efforts which have heretofore been made and are still making, under the authority of this commonwealth, to improve the navigation of the river Susquehanna, and of the other great rivers of Pennsylvania.

6. *Resolved,* That we regard with satisfaction, the efforts of our sister states, to make extended improvements, and that, in our opinion, a wise and liberal policy requires of Pennsylvania, to grant to them every just and legal facility, wherever her concurrence may be necessary to their successful prosecution; and that we have witnessed, with pleasure, the progress made towards laying out a canal from the Potomac to the Ohio, as well as the steps taken by the state of New York, for forming a connection with the north branch of the Susquehanna.

7. *Resolved,* That Messrs Carey, Kennedy, Ingham, Holgate, Patterson, Markley, Sill, Forster, and Baird, be a committee of correspondence, and that they be requested to prepare an address to the people of Pennsylvania, upon the subject of internal improvements.

The following are the votes on the sixth resolution.

Yeas.—Messrs. John Dickson, Samuel Sloan, *Adams county*—Ephraim Pentland, Joseph Patterson, Matthew B. Lowrie, Harmer Denny, *Alleghany county*—Thomas Blair, *Armstrong county*—John Tod,* James M. Russel,* *Bedford county*—Lewis Reese, Nathaniel P. Hobart,* Isaac Heister, Peter Eckhart, *Berks county*—Edward Herrick,* *Bradford county*—Samuel D. Ingham, William Carr, John W. Wynkoop, Matthias Morris, Henry Chapman, *Bucks county*—John Gilmore, John Bredin, *Butler county*—Moses Canan, *Cambria county*—Thomas Burnside, Francis W. Rawle, *Centre and Clearfield*—David Townsend, Joseph Sharp, Joshua Evans, Joshua Hunt,* *Chester county*—Daniel Montgomery, Christian Brobst, John M'Reynolds, *Columbia county*—John B. Wallace, Arthur Cullum, *Crawford county*—Robert M'Coy,* Jacob Alter,* Henry Vethake,* *Cumberland county*—John Forster, Silas Marsh, *Dauphin county*—George G. Leiper, Thomas Smith, *Delaware county*—Thomas H. Sill, Giles Sanford, *Erie county*—James Todd, Samuel Evans, Thomas Irwin, John Kennedy, *Fayette county*—Robert Smith,* Thomas H. Crawford, George Chambers,* *Franklin county*—William S Harvey, Robert Whitehill, *Greene county*—John Scott, John Blair, *Huntingdon county*—Nathaniel H. Loring,* Joseph Barnett, *Lebanon county*—Henry King,* Stephen Balliet, Jonas Rodrock,* *Lehigh county*—Jacob Cist, Nathan Beach, *Luzerne county*—Robert M'Clure, Andrew D. Hepburn, *Lycoming county*—Thomas S. Cunningham, *Mercer county*—David Crawford, *Mifflin county*—Levi Pawling, Philip S. Markley, Thomas Baird, Jacob Dewees, *Montgomery county*—James M. Porter,* Wm. Broadhead,* *Northampton county*—Lewis Dewart, William Tweed, *Northumberland county*—Abraham Addams—John Sergeant, Manuel Eyre, Charles J. Ingersoll, William Lehman, Mathew Carey, Wm. J. Duane, *Philadelphia city*—Jacob Holgate, James A. Mahany, Joel B. Sutherland, George W. Riter, Samuel Breck, James Ronaldson, Samuel Humphreys, *Philadelphia county*—Jonathan Colegrove, *Potter and M'Kean*—Thomas S. Ridgeway, *Schuylkill*—John Gebhart, Abraham Morrison, *Somerset county*—Jabez Hyde, Junr., *Susquehanna county*—Uriah Spencer,* *Tioga county*—James Merril, Geo. Kremer, *Union county*—Alexander M'Calmont, *Venango*—Archibald S. Tanner, *Warren county*—Joseph Lawrence, Joseph Ritner, Alexander Reed, Thomas H. Baird, Thomas M'Giffin, *Washington county*—John Young, James Clarke, Andrew Boggs, *Westmoreland county*—Charles A. Barnitz,* Wm. Diven,* Philip Smyser,* *York county*—107.

Nays.—James Buchanan,* George B. Porter,* Jacob Peelor,* Hugh M'Cullough,* Robert W. Houston,* M. R. Buttz,* *Lancaster county*—6.

EDUCATION.

" 'Tis education forms the common mind,
"Just as the twig is bent the tree's inclin'd."

Amongst other pleasing circumstances incident to a visit in June last, to the Military Academy at West Point, was the opportunity it afforded of cultivating the acquaintance of the Superintendent and Professors of the institution, and the members of the Board of Visiters, some of whom are known as being amongst the most accomplished scholars of the present day. Men, of whose attainments and moral examples any state might be proud—whose conversation must be a source of pleasure and improvement to all who inhabit within the sphere of their society One of these was professor George Bancroft the associate of Mr. Cogswell in the superintendence of a seminary of learning at Northampton, in Massachusetts. How truly dignified and honourable is the office of instructor of youth, when filled by such scholars. Gentlemen of extensive travel and observation, who have carefully noted within their walls all the excellencies and the defects of the best institutions of Europe; who have studied the philosophy of the art of education; and who undertake the duties of the tutor—not to be driven as a trade for profit, but with an honourable sense of their responsibility, and for the credit and the happiness of illustrating such principles of education as tend most effectually to "raise the genius and to mend the heart," of the growing generation. Having a personal interest in the subject independently of its general importance, we took some pains to learn the character and to ascertain the objects and course of instruction, which brought us to the conclusion, that of all seminaries in any country, for our own children, we should prefer the institution, which has been established at Northampton, Massachusetts, by the above named gentlemen, for the liberal education of boys, whereof the following sketch may be taken as an outline. It has now been in successful operation for nearly two years. During that period they have had the satisfaction of receiving proofs of the confidence of their early friends, and new ones have most unexpectedly risen up to them in the most distant parts of the Union. Their object is, to educate the young; they make themselves responsible not merely for providing efficient means of instruction, but also, to the best of their ability, for the happiness, morals, and health of their pupils. In giving instruction they endeavour to enlarge and liberalize the mind, and at the same time to form those habits of mental activity, and to convey that kind of knowledge, which may change talents into powers, improve and discipline the mind for the great purposes of life, and prepare for a career of honour and utility.

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* Those gentlemen whose names are marked with an asterisk, voted against the first, second, third, fourth, and fifth resolutions; all the others voted in the affirmative on these five as well as the sixth.

Liberal treatment is considered by them as essential to a liberal education. Hence they attempt to unite the careful superintendence and generous treatment, which belong to a private family, with the abundant means of intellectual culture, which may be brought together in a public seminary. Discipline is the constant instilling of good principles into the forming mind, and by precautionary discipline, the endeavour is made to prevent faults, that so there may be little need of punishment or severity. The relation which exists between the pupil and his instructor, is that of the weak to the strong, of the dependent to his protector; and so the discipline adopted, though strict, is mild and affectionate, and, whether encouragement or censure is needed, of a parental nature.

The place selected for this establishment is one, where the scenery is of great natural beauty. It is also remarkable for its salubrity, and within the limits of the lands appropriated to the purposes of the establishment, the means of various amusement are abundant. Its members are consequently saved from all dangerous external influence, while there is variety and action enough at home, to promote cheerfulness and develop character. Pocket money, as it is usually called, is entirely unknown in the institution; every reasonable want is provided for; some favour is also shown to boyish desires; but it is considered that money given for the sole purpose of being wasted, can lead to no good habits, and is in every way dangerous.

Great watchfulness is observed for the preservation of health, not less than of morals. The diet of the boys is simple, but of the best kind that can be procured. They sleep on mattresses, both in winter and summer; and great care is taken to give to all both rest and exercise, sufficient for strengthening the body during the season of its growth. A system of gymnastics has also been devised, by means of which it is expected, that healthy exercises of the body and games may serve as the relaxation of the mind, and so some occupation be found for every part of the day, without injury or fatigue.

The means of instruction embrace at present the ancient languages, the four most important of the modern, French, Spanish, Italian, and German; our own language, and its literature, elocution, &c. the mathematics, history and geography. The natural sciences are also taught to those who are ambitious of some acquaintance with them. A writing and a dancing master are also in attendance.

The four most important modern languages are taught by gentlemen familiar with the duty of instruction, educated in literary habits, and respectively *natives of Spain, France, Italy and Germany.* The gentleman, who we understood was, in October, to take charge of the Spanish, was educated at the Spanish university of San Jago, and was led to this country by his unwillingness to submit to oppression. Should any disappointment take place with respect to this important branch, Mr. A. H. Everett, our present minister to Spain, has promised to use all means in his power to secure to the institution of Northampton, the assistance of an efficient and intelligent teacher from Spain. The language and literature of France are taught by Mr. N. M. Hentz. His father, a member of the National Convention, came to this country a few years since, for safety, and his son, though he was just completing his course at the university of Paris, did not hesitate to follow his father's fortunes. He may be considered as permanently connected with the school of Northampton. For the Italian there is Mr. D. Gherardi, of Arezzo, educated at Pisa, in Tuscany. He assists also in the department of Latin literature, for which he is particularly qualified by his Italian education.

The department of Greek and Latin literature, is principally entrusted to two German scholars, of established reputation in their own country. Mr. Cogswell and Mr. Bancroft did not hesitate to assume the responsibility of inviting these men of letters to join them, believing it the surest way of providing satisfactorily for instruction in ancient literature. While they leave it to the parents of their pupils to decide how much time may be given to Latin, and whether Greek shall be learned at all, they engage that boys in the Northampton establishment, can be carried in both these languages to any extent which may be desired. Dr. Beck was educated at the universities of Berlin and Heidelberg, under Wolf, Boeckh, Creuzer, Schlosser, and the other great masters of history and philology. Previous to his embarking for America in 1824, he was a professor at Basil, in German Switzerland. Dr. Bode acquired his knowledge and his early reputation at Gottingen. His book, entitled "Orpheus. poetarum Græcorum antiquissimus," won the highest prize in that celebrated seat of learning. It was through the polite friendship of Heeren, the eminent historian, that Dr. Bode was engaged for the school at Northampton. He arrived in this country in the month of June last, and has already entered upon his official duties. These gentlemen likewise instruct in their native language, the German.

There is one other language, in which it is deemed important to give careful instruction; it is the English. A pure pronunciation, a graceful delivery, a correct style of reading, have been thought so desirable, that a gentleman has been attached to the institution, whose sole duty it is to instruct in the various branches of elocution, in reading, modulating the voice, gesture, and just delivery. There is reason to hope that, these endeavours to raise the standard in a subject of such general utility, and in our country of such public importance, will be attended with success. Whatever relates to instruction in composition and the history of English and American literature, is attended to by Mr. Bancroft. An attempt will be made to raise this branch of study and intellectual exertion to a good degree of practical utility, by following, in some measure, the methods used in the schools of the ancients, since no acquisition can be of more constant value, than a knowledge of the English, and the art of using it well in public speaking and in writing.

The department of mathematics, geography, and the natural sciences, belongs particularly to Mr. Cogswell, who, in this branch of instruction, is assisted by a young man of distinguished merit. All will, if their powers admit of it, be instructed in arithmetic, algebra, geometry, and trigonometry. The practical part of mathematics and the higher branches, will be taught to those who have a particular interest in them. The natural sciences, especially mineralogy and botany, will be taught to voluntary classes.

Boys under the age of twelve, are admitted into the school of Northampton without any discussion. If a parent desires to place a son there, who is past that age, proof is required, that he will be studious and docile; and he is admitted only, on the distinct understanding, that if he should fail in complying with the rules of the institution, his parents may be called upon to remove him. It is believed, however, that it will very seldom, almost never, be necessary to resort to this extreme measure; and if it were to occur frequently, it might rightly be urged as an objection to the discipline of the school.

If it be asked in what relation this school is to stand towards other seminaries of learning, it is hoped that it will be able to take a place independent of any, and to co-operate with all in promoting the cause of useful knowledge and good morals. It is open to all who wish for a liberal education, whatever their future intentions and prospects may be; and while it receives boys in the earliest stages of knowledge, it is ready to continue its care of them to the time when they must enter on the business of life, their particular professions, or pursuits.

The terms are three hundred dollars, annually, payable quarterly in advance. This includes all expenses of living and instruction. The boys find their own clothes and books. On going to the school, each takes or procures his own mattress, and the necessary bed-clothes.

During the whole time that the establishment has existed, there has, it is said, been no alarming case of sickness; and hardly a case of indisposition. Yet to quiet all apprehensions, a person of much experience, who has for many years been the chief nurse in the hospital of Boston, and who showed the best testimonials from the physicians of that city, has recently been attached to the establishment.

The gentlemen, who conduct this institution, have not rashly engaged in so responsible an undertaking. More than ten years have elapsed, since Mr. Cogswell first entered on the duties of an instructor in the university at Cambridge. Since that time, he has been repeatedly in Europe, has resided at the principal universities of Germany, of which he obtained the academic honours, and visited the most considerable places of education in England, Scotland, and on the continent. Mr. Bancroft, immediately after taking his degree in a regular manner at Cambridge, in 1817, was by the parental liberality and influence of President Kirkland, the venerable head of that university, enabled to resort to the foreign schools. He pursued his studies in Germany for nearly three years, and after an examination and public trial, was admitted to the highest degrees in the philosophical faculty. During his stay in Germany, he visited the universities of Gottingen, Berlin, Leipzig, Halle, Heidelberg, and others, and spent much time at the most respectable gymnasia in Hanover, Saxony and Prussia, that he might become familiar with their methods of governing and instructing the young. He also had an opportunity of travelling in France, Switzerland and Italy.

The highest commendation which these gentlemen desire is, that of serving their country to the best of their ability; and they would esteem it the most pleasing success, if, while they advance those who are entrusted to their care, in useful knowledge and good principles, they may also be able to do something towards elevating the standard of liberal education in their country.

LADIES' DEPARTMENT.

COWSLIP—PRIMULA VERIS.

PRIMULACEÆ.—PENTANDRIA MONOGYNIA.

The Cowslip, i. e. cow's lip, is of the same genus as the primrose.

The common cowslip, or paigle, is common in Europe, both in moist sand and upland pastures, and on the borders of fields. In a clayey or loamy soil it thrives best, and prefers an open situation. It flowers in April and May. Though respected both for its beauty and utility, the cowslip, in pastures where it is very common, becomes an injurious weed. The leaves are eaten in salads, and recommended for feeding silk-worms before the mulberry leaves make their appearance. The flowers are very fragrant; and a pleasant and wholesome wine is made from them, approaching in flavour to the muscadel wines of the South of France. It is said to be an inducer of sleep.

> ——————"For want of rest,
> Lettuce and cowslip-wine: *probatum est.*"—Pope.

These flowers have a rough and somewhat bitter taste; which, with their agreeable odour and yellow colour, they impart both to water and spirit. A pleasant syrup is made from them; and a strong infusion, drank as tea, is considered antispasmodic. The colour, as is well known, is usually a bright yellow, dashed with deep orange, sometimes approaching to crimson. Thus Iachimo describes Imogen as having

> ———————"on her left breast
> A mole cinque-spotted, like the crimson drops
> I' the bottom of a cowslip."

But there is a variety with red flowers. They will sometimes flower again in November and December. Mr. Martyn speaks of some in his own gardens which always blew at that season when the winter was mild.

The light stalk of the cowslip, gently bending with its weight of flowers, is elegantly described by Milton, who takes advantage of this drooping appearance to select it, with some others, to adorn the tomb of Lycidas:

> "Bring the rathe-primrose that forsaken dies,
> The tufted crow-toe, and pale jessamine,
> The white pink, and the pansy freak'd with jet,
> The glowing violet,
> The musk-rose, and the well-attired woodbine,
> With cowslips wan that hang the pensive head,
> And every flower that sad embroidery wears:
> Bid amaranthus all his beauty shed,
> And daffodillies fill their cups with tears,
> To strew the laureat hearse where Lycid lies."

And again, in the song of Sabrina, how beautifully does the unbending flower, and the airy tread of the goddess, each express the lightness of the other:

> "By the rushy fringed bank,
> Where grow the willow and the osier dank,
> My sliding chariot stays,
> Thick set with agate and the azure sheen
> Of turkis blue, and emerald green,
> That in the channel strays;
> Whilst from off the waters fleet
> Thus I set my printless feet,
> O'er the cowslip's velvet head,
> That bends not as I tread;
> Gentle swain, at thy request,
> I am here.

The oxlip is by no means so common as the cowslip: it is considered as a link between that and the primrose. It has been called the great primrose: but though the oxlip flower spreads wider, the cowslip has the advantage in height. On this account Shakspeare selects the latter for the courtiers of the Fairy Queen, in allusion to the tall military courtiers called Queen Elizabeth's pensioners:

> "The cowslips tall her pensioners be
> In their gold coats spots we see;
> Those be rubies, fairy favours,
> In those freckles live their savours;
> I must go seek some dew-drops here,
> And hang a pearl in every cowslip's ear."

The single cowslip is rarely admitted into gardens, but the double flowers are common: they have a good effect by the side of the dark polyanthus, or shaded by a bunch of glowing wall-flowers. The roots may be purchased almost for nothing. They who desire to have the single flowers may transplant the wild roots, which should be done about Michaelmas, and they will have time to gain strength for flowering in the spring. But it must be observed, that although these plants, in their wild state, are entrusted to nature's care, and though we must confess that she deserves this confidence, we must no longer depend entirely upon her care of them, after we have removed them from her own great garden.

Cowslips love a moist soil; and when we plant them in a pot, the small portion of earth which it contains will naturally dry much faster than in the open ground: therefore, as we do not remove the brooks and springs with them, we must supply this deficiency by giving water to the potted plants in dry weather; in return for which, if we will find artists to manufacture it, they will furnish us with honey in abundance: for—

> —————"rich in vegetable gold
> From calyx pale the freckled cowslip born,
> Receives in amber cups the fragrant dews of morn."

A FAT PIGEON.

A lady who had been a long while under the care of a London physician, was advised by him to visit Bath, and her attentive friend furnished her with a letter of introduction to a no less able practitioner at that place. The lady, with true feminine curiosity, stimulated not a little by a natural wish to know his real opinion of her case, so far violated the laws of honour as to break the seal—when she found, to her utter dismay, the letter, of which she was the bearer, to be as follows:

"My dear friend,—I send you a fine fat pigeon, whom I have well plucked, and who will bear more plucking. Pray make the most of her. Yours, ever."

From this letter, laconic as it was, the lady derived more benefit than from all the prescriptions of her physician; for instead of going to be plucked, she staid quietly at home, abandoned doctors and medicine, and with the letter, sent a ready-plucked pigeon to the physician at Bath.

MISCELLANEOUS.

MASONIC INSTALLATION.

[The installation of Stephen Van Rensselaer, as grand master of free-masons in the state of New York, is thus appropriately noticed by H. Niles, Esq., Editor of the Weekly Register; than whom no man or mason, can better judge when things are done "by the square."]

The longest article allotted for this number of the Register, is the address of De Witt Clinton, on the installation of Stephen Van Rensselaer, as grand master of free-masons in the state of New York, which will be gladly received by the members of this ancient and numerous fraternity, and be read with pleasure by the uninitiated. The ceremony, certainly, acquired uncommon interest from the fact, that *Clinton* installed *Van Rensselaer.* The fame of the first is as imperishable as his works, and posterity will rejoice that he lived to bless this nation with the efforts of his great and enlightened mind; and, while beneficence shall remain and charity be regarded as a virtue amongst men, the name of the last will never be uttered but with reverence. Mr. Van Rensselaer is, perhaps, nearly the most wealthy individual in the United States, and his means to do good are not more ample than his heart to do it. He is a common benefactor and peace-maker of the neighbourhood in which he resides; and yet a plain man, who does not seem to feel that he is more than the humblest of his fellow beings, if they conduct themselves soberly, honestly, justly—doing unto others as they would that others should do unto them.

NUMBER OF GRAINS OF CORN IN A BUSHEL.

An English farmer has given the following as the result of an experiment to ascertain the weight and number of a Winchester bushel of each of the undermentioned sorts of grain—

	Wheat in lbs.	*No. in grains.*
Wheat,	62	550,000
Barley,	52½	520,000
Oats,	32	1,260,000
Poplar peas,	64	110,000
Horse beans,	64	37,000

SPORTING OLIO.

Washington Jockey Club Races.

Friday, October 21.

The race yesterday, two mile heats, was handsomely won by Mr. Brightwell's Rattler colt *Fairfax*, beating Mr. Sewall's *Lady Hal.* Mr. Van Swearingen's *Hickory,* and Mr. Smith's *Gentle Kate.* The first heat was run in 3 minutes 46 seconds, being the fleetest running that ever took place on this turf

Before starting, Lady Hal was the general favourite, and bets were made of two to one on her against the field. Great disappointment, therefore, was experienced, when the colt Fairfax took the first heat by two or three lengths, and the second by almost a full distance over all his competitors.

Besides showing excellence in the winning colt, a friend of the turf suggests that it reflects great credit on his trainer, our townsman, Mr. Brightwell, who, we understand, took the colt off a grass field, in poor condition, four or five weeks ago, and since then has broke, fattened, and trained him.

Second Day.

Mr. Brightwell's sorrel colt Fairfax, . .	1	1
Col. Sewall's brown mare Lady Hal, .	2	2
Mr. Van Swearingen's bay horse Hickory,	3	3
Mr. Smith's sorrel mare Gentle Kate,	dist.	

Third Day.

The races to day were very interesting, from the apparent uncertainty, during nearly the whole of both heats, of the final result. Of the three horses that started, each occasionally took the lead, and alternately excited the hopes and fears of the betters, and the interest of all. The victory was handsomely contested and not won without a severe tug. The following are the particulars of the heats.

Col. Sewall's brown mare, Trip-it,	1	1
Mr. Van Swearingen's bay horse, Hickory,	2	3
Mr. Sleeper's grey horse, Driver,	3	2

The second heat was handsomely contested between Hickory and Driver, the latter succeeding in gaining the track in the last quarter of the heat, and Trip-it then running up with Driver, and beating the heat by one half a length only. [*Nat. Intel.*

TECHNICAL TERMS.

A brace of black game.
A leash of black game.
A pack of black game.
To raise a black cock or pack.
A brace of grouse.
A leash of grouse.
A brood or pack of grouse.
To raise grouse.
A brace and a half of partridges.
A brace of partridges.
A covey of partridges.
To spring partridges.
A brace of quail.
A brace and a half of quail.
A bevey of quails.
To raise quails.
A brace of pheasants.
A leash of pheasants.
A ni, (or nid,) or brood of pheasants.
To push or spring a pheasant.
A couple of woodcocks.
A couple and a half of woodcocks.
A flight of woodcocks.
To flush a woodcock.
A couple of snipes.
A couple and a half of snipes.
A wisp of snipe.
To spring a snipe.
A team of wild ducks.
A gaggle or flock of geese
A wing of plover.
A trip of dottrell.
A couple of pointers or setters.
A leash of pointers or setters.
A couple of spaniels.
A couple and a half of spaniels.
A brace of hares.
A leash of hares.
To start or move a hare.

A pair—A couple—A brace.—A pair is two united by nature, (*par;*) a couple by an occasional chain, (*copula*); and a brace, by a noose or tie. A pair of swans. A couple of hounds. A brace of partridges—a pair is male and female; a couple, two accidental companions; a brace, tied together by the sportsman. He keeps a pair of pheasants in the hen roost. We saw a couple of pheasants feeding on the bank. You shot a brace of partridges.

THE FARMER.

Baltimore, Friday, October 28, 1825.

Internal Improvement of Maryland.

We are glad to see that a meeting of the citizens of Frederick county was called, for Wednesday evening last, to consider of the best means of promoting the Internal Improvement of the State. This example, if there be any enlightened publick spirit in the state, will be contagious, and be followed by similar meetings in every county, to result finally in a general State convention. We have had enough of *talking!* The wagoner has called long enough upon Hercules—it is time he had put his shoulder to the wheel! Since we have not had spirit *to lead the way*, let us not be too blind to see, or too proud to follow, when others open it to our view.

In a few days we shall see what has been done in Frederick county—whose citizens have so much at stake in the best developement of our internal resources; and let each county stand ready to cooperate in such measures as may be recommended for the *general welfare!* It is not known what measures may be recommended by a convention, but none can dispute the utility of assembling at some central point, the intelligence and the best views of the state. "Give us but light." Ours may be denominated a popularity-loving legislature. Few members look beyond the geographical bounds and the present interests of their own county, and at the first and last view of every question, the member turns his head over his shoulder to see at home how many votes are to be won or lost by the step he is invited to take. If, then, the people wish to have any thing done, let them make their impress on the legislature by the instrumentality of a convention of delegates from each county. Let them proclaim it as the highest duty of its publick councils to develop and improve the natural resources of the state—let them make known their determination, that the welfare of the whole state shall no longer be sacrificed on the shrine of individual popularity and local interests—let them, by means of a state convention, promulgate these resolutions. in a voice that shall resound, as Mr. Adams says, "like the rushing of many waters from every corner of the land"—and then, and not till then, shall we cease from prating, and go seriously to work.

☞ Cotton Planting.—The great value and extended culture of this article, renders every thing interesting that concerns it. In No. xxviii. p. 220, of this vol. we published a communication from Mr. F. H. Smith, stating his having invented a machine to save effectually the tedious labour of *planting by hand*—which he supposed to be the general mode on the large plantations of the south. It was expected that ere now we should have learned from some friend in that quarter, whether any such machine for labour saving, was already in use, but we have had no intimation on the subject. An opportunity has been embraced to see Mr. Smith's cotton planter tried, and as far as we are capable of judging, it fully answers the demand. The difficulty has been found to consist in *separating* the seed of the cotton, which are very adhesive. This difficulty has been completely overcome by Mr. Smith, but we have not time or means at present, for a more minute description of the implement. The ingenious inventor is a gentleman of great respectability, the same who invented the scientific arrangement and use of musical glasses, called the Grand Harmonicon, which has yielded such exquisite gratification to all who have heard it. He is, moreover, the grandson of the celebrated Francis Hopkinson, of the revolution; whose musical taste and genius he seems to have inherited.

An Exchange Proposed.—Who is willing to give for a pair of *genuine* beagle hounds, male and female puppies, a good common squirrel gun? A gentleman in Montgomery, would supply the dogs.

Tobacco.—Amount of inspections in the state warehouses, during the last week—Warehouse, No. 2. 92 hhds.—Warehouse, No. 3, 112 hhds.—Total, 204 hhds.

DEVON CATTLE.

For sale, a full bred Devon bull calf, nearly three months old and of great promise, his mother was imported from England, and is an uncommonly fine milker, also will be sold to accompany him (if desired) a full bred Devon Heifer calf, nearly five months old, of good form and from a superior cow. They are warranted of genuine blood and the lowest price for both is $250 or $100 for the bull *only*.

Also a three fourths Devon heifer calf, four months old, and from one of the finest cows in the state, price $50.

Also a three fourths Devon heifer of great beauty, is heavy in calf by the imported full bred Devon Bull, Garrick, and will be sold for $75 with her calf.

Balt., 27th Oct., 1825. HENRY THOMPSON.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	9 00	10 00		
BACON, and Hams, . .	lb.	7	10	11	
COFFEE, W.I. Green, .	—	18	19	20	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	20	23		
Georgia Upland, . . .	—	16	18		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	13	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	7	10	12	15
FEATHERS, Live, . . .	—	33	35	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	3 25	
Shad, trimmed,	—	6			
FLAXSEED, Rough, . .	bush	1	1 15		
FLOUR, Superfine, city,	bbl.	5 00	5 50	6 00	6 75
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	4 50	4 75	none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	53	55		
Wheat, Family Flour,	—	1 05	1 15		
do. Lawler, ...	—	92	1 00		
do. Red, ...	—	95	1 00		
Buckwheat, ...	—	55	75		none
Rye, ...	—	55			
Barley, ...	—	70	75		
Clover Seed, Red . .	—	5 00	5 50	6 00	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25	2 50		
Oats, ...	—	32	35		
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1 50	1 62		
HEMP, Russia, clean, .	ton	200			
HOPS, ...	lb.	28	30		
HOGS' LARD, ...	—	10	11	12	
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	23	25		
MOLASSES, W. India,	gal.	34	40		50
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	6½	7	8	9
NAVAL STORES, Tar,	bbl.	2 25			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2	2 12		
OIL, Whale, common, .	gal.	27	30		
Linseed, ...	—	80	82		
PORK, Baltimore Mess,	bbl	14 50		15 50	
do. Prime, . . .	—	10 50		12 00	
PLASTER, cargo price,	ton.	5 37	5 50		
POTATOES, ...	bush	75	1 00		
RICE, fresh, ...	c.lb.	3 25	3 50	5	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	28	30	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	34		50	
SUGARS, Havana White,	c.lb.	13 00	14 00	15 00	16 00
do. Brown, . .	—	11 00	11 50		
Louisiana, ...	—	10	11 00	11 50	12 50
Leaf, ...	lb.	19	22	20	22
Lump, ...	—	16	18	19	
SPICES, Cloves, ...	—	85	90	1 00	
Ginger, Ground, . . .	—	7	10		
Pepper, ...	—	18	19	25	
SALT, St. Ubes, ...	bush	40	42		
Ground Alum, ...	—	52		62	
SHOT, all sizes, ...	cwt.	9 50	10	12 50	
WINES, Madeira, L. P.	gal.	2 00	2 50	3 00	4
do. Sicily, . .	—	1 10	1 25		
Lisbon, ...	—	1 12	1 20	1 50	1 75
Claret, ...	doz.	3	8		
Port, first quality, . .	gal.	2 00		2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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AGRICULTURE.

THE PRIZE ESSAY ON THE OX.

[The Premium Plate offered by the venerable Charles Carroll, of Carrollton, for the best essay on the use of Oxen, and their value in comparison with horses, for agricultural purposes in the middle and southern States, was awarded to the author of the following Essay:]

To the Maryland Agricultural Society.

Having had considerable experience in the use of the ox for conducting my farming operations, I am induced to offer for your consideration the following essay relative to this most docile, sagacious and valuable animal; under a full conviction, that were his intrinsic merits more generally known, and his excellent properties brought more into action; many of our agriculturists would find in him (what our neighbours to the east have already done,) an actual saving, of which they have at present but little idea. I have for several years past performed the requisite labour on a farm containing 160 acres of arable land, by their means and the aid of but one work horse. As far as my experience has gone, it is best for those who raise their own oxen, to break them to stand, and lead by the halter, when calves not exceeding one year old. Occasionally, they may be handled in this way, to keep them gentle; and at the same time they may be taught to "gee," "haw," stop, and start when told, and thus far, in relation to them, verifying that saying of the wise man—"train up a child in the way he should go, and when he is old he will not depart from it." But they should by no means be yoked, until shortly previous to the time it is intended to put them to work; as they could not be *profitably* employed, it would involve some expense to handle them sufficiently to break them *effectually*—and unless this is done, they are liable to get a habit of running in the yoke, which it is extremely difficult to correct.

The proper time of putting them to work is at three years old, and such as have not been handled as above stated, should be driven round the field by a boy for a day or two, or until they are pretty well tired; the propriety of which course is established by the well known fact, that when put to the yoke immediately on coming out of a drove, they are much easier managed than when suffered to recover from their fatigue. They should then be tied by the horns (a rope slipped over and resting on the top of the head.) to the side of a house, taking care there be no place for the horns to become entangled; and suffered to stand tied in this manner till they cease to pull by the cord, which will in most cases be in a day or two. They may then be led very readily, and should be taught to *turn, stop,* and *start*, when told, in this single capacity, with as much reason as can be urged in favour of breaking one colt to perform any of these operations singly, instead of coupling two together for the better way—which any man accustomed to the use of horses would unhesitatingly condemn, as being most likely to end in the destruction of one or both of them; which has not unfrequently been the case with young steers, when that plan has been pursued.

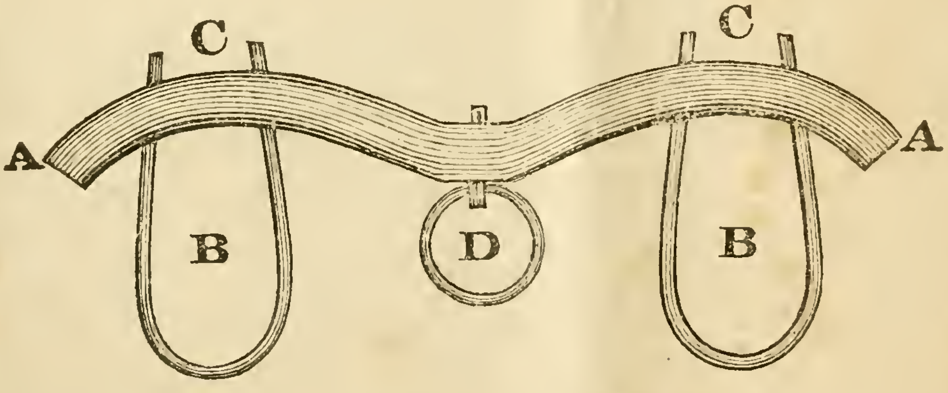
When two young cattle are yoked together, and turned loose to run and plunge about, they are almost certain to acquire a habit of running away; and even should this not be the case, one, and sometimes both, lose a part of that valuable member, the tail, in these violent exertions. When they are sufficiently broken to the halter, they may be placed side by side, for the purpose of receiving the yoke, having reference to their relative size, strength and mastership: because if one is stronger and more free than the other, he should be placed on the off side, that the team may rather incline *to* the driver than *from* him.

If one should be larger than the other, he will be likely to be stronger and more free; and should they be put to the plough, the furrow ox being the larger, the yoke will be kept nearer level than in the other case. It requires but little observation to see they are turned to the right easier than to the left; therefore, if the master ox be on the off side, he will assist in controlling the near one in "coming round;" but when reversed, and the master ox on the near side, and he not altogether willing to "come here," the team is sometimes stationary: for let the *then* off ox be ever so willing to obey the voice of the driver, the horn of the near one speaks in a contrary language equally intelligible. After the yoke is put on securely, their tails should be well tied together, and they suffered to stand tied as before, until a strong pen is built round them not more than 16 or 18 feet in diameter, taking care that the ends of the rails do not extend inwardly. The ropes should then be loosed, if possible, in such a way that they will not be sensible of it. Here they will in a short time learn to turn themselves about without one violent exertion, or the least fright. They should be tied up as before at night, their tails untied and the yoke removed, to be replaced in the morning as before; and the day following they may be led or driven in a larger space. By this time the cause will be gained in a manner calculated to insure a prime pair of cattle. They may now be attached to something light, and led about for a few hours, daily and gradually increasing the draught, and greasing their necks occasionally, to prevent galling. When put to the cart or harrow with others already broken, *contrary to the common practice,* they should be placed before, instead of behind them; by which arrangement it will be found, that if frightened, the old cattle will not let them run: but if otherwise, they, by running against the older ones, may frighten them also.

There are several modes of gearing oxen, as we are informed. In some parts of the world, they draw by means of a strap passing over the forehead, and attached to the yoke immediately behind the horns. In some parts of our own country, they are geared similar to a horse: but both of these modes are too confining to the animal, particularly in the "middle and southern states," where the flies are very annoying to them during the summer season. Neither is he capable, when thus geared, of exerting his full strength so effectually. For it is observed, when in a state of nature, and all his energies are called into action, by an effort to defend himself from assailants, the head and neck are placed very nearly in the same line of declension that we find them when drawing his heaviest burthens under the yoke; which latter mode, for the reasons above stated, is greatly to be preferred.*

In gearing oxen in this, as well as every other mode, great care in fitting the harness to them properly, is their due. Notwithstanding the yoke is the most simple method by which this animal can be geared, yet a shameful abuse of him in this particular has been too often manifested.

The proper length of a yoke for cattle of a moderate size, is about four feet one or two inches from end to end. It should be made of a piece of light timber, seven inches broad by five and a half thick, so as to allow a hollow or bend in the middle, sufficient to lower the ring through which the tongue of the cart passes, to a line with the centre of the neck: this keeps the tongue nearly level with wheels of the usual height. That part of the yoke coming immediately in contact with the neck, should be from five to five and a half inches wide, and two and a half inches thick in the centre, rounding off before and behind, so that it shall be rather round (or oval,) than flat, by which means it will slide backwards and forwards without wrinkling the skin, and consequently galling the animal. The holes for the bows should not be bored more than from six to eight inches apart from centre to centre, for the largest cattle, as this gives sufficient room for the neck, if the bow is properly shaped. If they are wider, and both cattle should incline one way, it will give one of them an advantage in the length of yoke, of perhaps two or three inches. The bows should be made of hickory or white oak, and not less than one and a half inches in diameter, perfectly round the whole length, which will give them greater strength, and consequently durability. They are easily bent to the required shape by boiling them a short time, which may be effected by placing them in a trough with water and throwing in a few heated stones. The following diagram will give some idea of the best form for a yoke:



From A to A, 4 feet 2 inches. That part of the bows marked B B, eight inches wide in the clear. C C, 4½ inches in the clear. D, the ring, 6 inches in the clear. B D and B, should form a straight line in the centres.

In working an ox singly, instead of the hames and collar, he should be geared with a single yoke. When with the former, and the draught is heavy, the pressure of the traces on his sides is very great, which is entirely obviated by the plan proposed. The proper length for a single yoke, must be ascertained by the thickness of the animal; so that the traces will be as far apart when fastened to a small hook on the under side of each end, as is required to prevent his sides from being chafed. The following will show the proper shape of the single yoke. It will be observed, that by placing the hooks perpendicularly through the ends of the yoke, that the draught is applied precisely as in the double yoke, and the bow consequently keeps its proper place:

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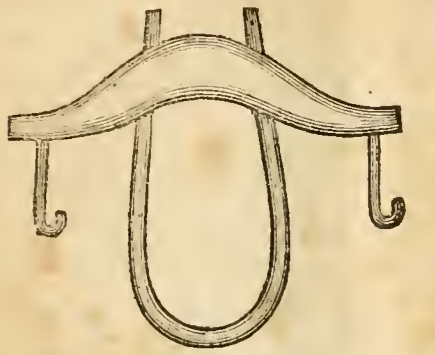
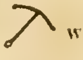
* Another reason for this preference given, when treating of the single yoke.



The whole of this latter plan will, perhaps, appear quite novel to many; but it has for some time past been successfully practised by one of my near neighbours, who uses oxen for the draught, to the entire exclusion of horses.

Oxen should, by all means, be stabled during the winter season, as their health and strength greatly depends upon their being protected from the cold and wet. In common with other stock, they will also keep in good order on less food, when this is the mode of treatment.

The stable should be divided into stalls 4½ feet wide, with a trough sufficient to contain as much straw, hay, or fodder, as will serve them during the night. In the front of the trough, should be inserted a staple, rivetted on the inner side, leaving space enough on the outer side for a chain to pass easily through. This chain should have a block appended to the lower end, of sufficient weight to keep the chain extended. About 18 inches from this end of the chain should be affixed a ring large enough to prevent its passage through the staple, to which should be attached two other chains of sufficient length for the two to meet round the neck. At the end of one of these should be a ring, and at the other a  which, when passed through the ring will fasten him. The weight of the block now keeps the chain stretched, and at the same time not so heavy as to prevent his lying down with ease.

In selecting steers for the draught, it is important to obtain such as will be most likely to endure the heat of the "middle and southern states," with the least suffering; and in order to obtain this end, the most effectual means is, to choose such as are most active and have the greatest depth and breadth of chest, and also breadth across the loins; which are the most important points in regard to wind and strength.

I am aware that popular opinion will be arrayed against me upon this point; but time and experience, so far from weakening, have only tended to confirm my views upon the subject. In opposition to this idea, I have never heard a reason given, in any degree satisfactory. We are gravely told, that to the eastward, a loose, open made steer is preferred. But, is it not an incontrovertible fact, that the more flimsy the construction of an animal, the weaker he is—and the weaker he is, the sooner he will be overcome by the heat? It is again asserted, that the long-legged open made steer can breathe more freely, and therefore does not suffer to the same extent in hot weather. Here it will be proper to observe, that long legs and a deep, broad chest, are rarely, if ever found in the same animal; and does it not appear reasonable that an appeal to facts, and an impartial examination of the matter, will satisfy any candid man upon this subject. But in addition to what I have stated, I wish to call the attention of the public to the very interesting address of Timothy Pickering to the Essex Agricultural Society, printed in the American Farmer, vol. ii., where, in the 81st page, he quotes the following as Thomas A. Knight, Esqr's answer to a query put by the President of the British Board of Agriculture. "The more deep and capacious the chest, and the shorter and lower any animal is relative to its weight, the better adapted it will be to live and fatten upon little food, the more labour it will go through; and I have always found the most short legged oxen to be the best labourers. It is also observed in Marshall's Rural Economy of Gloucestershire, that the best labouring ox he ever saw, had the shortest legs."

We again find the same experienced agriculturist, in his letter upon stock generally, published in the 3d volume of the American Farmer, page 178, making the same quotation; by which it may be inferred that his extensive and practical knowledge upon this subject is in agreement with the foregoing ideas.

To these may be added another and very respectable authority, in a statement given us by Sir John Sinclair, in his "Code of Agriculture," page 53, in which he says, "The form of animals has fortunately attracted the attention of an eminent surgeon, (Henry Cline, Esq., of London,) the substance of whose doctrines are, 1st, That the external form is only an indication of the internal structure; 2d, That the lungs of an animal is the first object to be attedned to, for on their size and soundness the health and strength of an animal principally depend; 3d, That the external indications of the size of the lungs, are the form and size of the chest, and its breadth in particular."

Steers of a moderate size, say from six to seven hundred weight each, are preferable as oxen, to such as are very large, because they are found generally to excel in activity and speed, at the same time will keep in better order than those of large dimensions, on inferior pasture. The observing teamster will find in the countenance of an ox, certain indications of his qualities. For instance: a full, prominent eye and lofty spreading horns, are observed to prevail amongst those of the most docile nature; on the contrary, short, crumpled horns, with an eye that not unfrequently shows the white, bespeak him of a restive disposition, and not so easily governed as the other. But when the load comes heavy, and the sound of the whip is heard, he must be strongly geared, or something will give way.

An ox, to move brisk, should move his feet in a line; that is, the hind feet should never deviate from the direction in which the fore feet pass; for the same reasons that horses are found to travel best that move in this manner: it being an indication of strong muscular powers and activity.

Let us now take a view of the comparative excellence of the horse and the ox, as applied to farming purposes generally, in point of economy.

Here it will be found, upon calculation, and with equal certainty when reduced to practice, that by substituting the latter in lieu of the former, the difference in favour of the ox is indeed immense. When at work, the horse must have at least three gallons of grain per day, and for six months in the year 125 lbs. of hay per week. Supposing him to be at work only two thirds of his time, and during the remainder to be kept on hay or pasture alone, he must consume upwards of ninety bushels of grain, and 2875 lbs. of hay annually; which latter is amply sufficient, with such pasture as the horse must have, (and some additional coarse food in the winter,) to keep the ox in prime order for work, without the use of any grain. Thus it appears, for every ox substituted for a horse, there is 90 bushels of grain saved in each year. Add to this, the difference in the wear of the horse, which must be renewed at double the cost of the ox at least once in twelve years: thus doubling the risk, even if the horse were no more liable to disease, which is known not to be the case. With the foregoing should be estimated $3 per annum for shoeing each horse, which is not found so necessary for the ox in the "middle and southern states," as in the eastern, owing to a difference in the climate and the roughness of the surface over which he has to traverse. Therefore, he who keeps four work horses, in 12 years must feed to them 4320 bushels of grain, the interest of which at *simple* interest, would make an aggregate of 5,706 bushels at the end of this period. This valued at 35 cents a bushel, would produce in cash ($2007.) two thousand and seven dollars. He must also have sunk $150, which is the probable *difference* between the first cost of four horses and four oxen. Add to this, the interest on this sum at *simple* interest for 11 years, which is 99 dollars; again, the shoeing of four horses is $12 per annum for 12 years, equalling $144. This, placed *still at simple* interest, amounts to near fifty dollars—making in the whole, *twenty four hundred and fifty dollars;* a sum equal to the purchase of a small estate: the whole of which is saved by the use of oxen; for after labouring till he is *ten* years old, and permitted to cease for *one* only, he will command more in beef than he cost at 3 or 4 years old as an ox. Consequently, he can be exchanged or renewed at pleasure, without a sacrifice; which is not the case with the horse, whose pecuniary value decreases with advancing years. To this it will, perhaps, be objected, that the ox is not equal to the performance of the same quantity of work with the horse, especially in the plough.

To this a reply may be found in an experiment at our Fair at the Maryland tavern, 1823, where, in the presence of hundreds of spectators, an ox-team, which started with five horse teams, was the second in completing the given quantity of ground, and would have been the first, had the horse team cleared out the middle furrow. But even admitting that the horse is able to do more *ploughing* in a day, there are many other kinds of work at which the ox is infinitely his superior; and may be sometimes geared and a small *job* done by a *boy*, in the length of time taken by a *man* to harness and hitch his horses to a waggon.

Another, and not the least consideration, is the difference of expense in purchasing and keeping in repair a cart and yoke, in comparison with a wagon and gear. The two latter considerations alone, being sufficient to justify the expense of keeping an additional yoke of oxen on a farm.

Seeing the embarrassments and difficulty under which many of the agriculturists in the "middle and southern states," labour at the present time, it cannot be too strongly urged upon those who are about embarking in agricultural pursuits as a means of securing a livelihood, (and who perhaps may be considered free from many of the prejudices which still exist against oxen,) to make the experiment at least, and give the thing a *fair trial,* before they encumber themselves with that *moth,*—a stock of farm horses. In doing which it will easily be seen they hazard nothing, for should any wish to abandon the plan after a sufficient trial, one summer's grass will enable them to obtain, (in cash,) an advance on the first cost of their cattle, if young and thrifty; and such are always to be had.

The funds of many a young farmer are very limited, and if in stocking his farm he has just money enough, (and no more than enough) for the purchase of four oxen and other indispensible domestic animals and farming utensils;—if he purchase instead of the oxen four good horses, he must *even now* give $300 for them, which will cause him to go in debt $150. Let him substitute four oxen, and his farm will be stocked with at least an equally effective force, and thus be enabled to start fair, and without being encumbered with the $150 debt, which together with some little contingencies he might otherwise have struggled through, may have been the foundation of incalculable difficulties, and in the end proved the rock on which he would have split.

There is a singular feature in the character of the ox which deserves notice, and that is his capacity for taking into the stomach a sufficient quantity of food in a very short time, to satisfy the cravings of nature for a longer period than any other animal used for the draught in our country. Hence while the horse is busily engaged in ranging the pasture, or standing at the manger for hours together, the ox is found taking his rest and chewing his cud. And again, it must be a smart boy or man, who will finish his breakfast or dinner ere his cattle will have swallowed enough to chew at intervals of leisure, until their driver becomes impatient to hear his summons to another repast.

Another and very important matter in relation to the management of oxen, remains to be noticed. As soon as the young cattle are sufficiently gentle to make it safe, and begin to understand the word of command, the halter should be laid upon the yoke, and the driver remaining near them, should motion with his whip as he calls to them to "come haw," touching the off one lightly with his whip upon the back, and the near one upon the nose. This will tend to reverse their motions, and facilitate his views. When turning to the right, touch the near ox upon his left side, at the same time passing rather before them, and motioning with his whip in front of the off one. By pursuing this plan I have had oxen under such complete command in a few weeks after being yoked, as to be entirely governable by the word and whip, without the use of the halter, which should, in all cases, be dispensed with as soon as possible. Great care should be taken for some time not to overload, and by this means discourage them, and they will very soon be found willing, Sampson-like, "to put forth all their strength."

There are many different instruments used for driving, but that which appears attended with most benefit and the least inconvenience to the animal and the driver, is a *light whip*, which is severe enough on *all occasions*, and when in the hands of the unfeeling and cruel, not so likely to be abused as a pole or even a goad, and can often be effectually administered through the medium of the ear: and surely all means within our power should be used to mitigate in every possible manner, the sufferings of such an invaluable animal.

Respectfully submitted by
THOMAS P. STABLER,
Of Montgomery county, Maryland.

ON IRRIGATION.

(*Concluded from p. 250, American Farmer.*)

V. *Of the Soil and Subsoil.*

Irrigation is not restricted to any particular description of soil. Land naturally wet, may be greatly improved by it, when accompanied by drainage; and it is equally beneficial to that which is dry.*

Rich loams produce the largest crops, even though the waters be not of the first quality. Peat bogs, when properly drained, will likewise yield good crops.† Irrigating adhesive clays is expensive, and the beneficial effects from it do not soon appear; but it is evident. from a meadow near Longleat, that even this sort of land may, by good management, be thus rendered more fertile; and it is well known that some of the best meadows in Gloucestershire, and at Woburn, are upon a clayey substratum.*

Barren slopes may be advantageously improved under the catch work system; and in this way much land, at present covered with heath, furze or broom, may be rendered productive of hay or valuable grasses. The most suitable soils, however, are those of a sandy or gravelly nature; more especially when they can be irrigated by muddy streams, the sediment of which corrects their excessive openness. Indeed, by means of the warm and rich waters of a low, fertile and populous district, impregnated with mud, and containing animal and vegetable manures, almost any soil may be converted into a rich meadow.

The bottom or subsoil of a water meadow, is of more consequence than even the quality or depth of the soil. A loose gravel, or bed of broken flint, with little or no intermixture of earth, where that can be obtained, is the most desirable subsoil. With such a bottom, in seasons when water is abundant, a soil not six inches in depth, is quite sufficient to produce large crops.

Effect of Climate.

The process of irrigation seems to be attended with much more beneficial effects in warm, than in cold climates. The difference of the seasons between Gloucestershire in England, and Aberdeenshire in Scotland, produces very important consequences. The latter is usually about five weeks more backward than the former: hence it is hardly possible to get such early crops of spring grass in the districts of Scotland, as are easily to be obtained in England; and thus, one of the principal objects of irrigation (feeding ewes and lambs in spring,) is thought to be unattainable. Nor will the application of water produce two, and sometimes even three crops of hay in Scotland, as it does in North America. The advantages of water-meadows, however, are important, independent of spring feed—more especially when the catch-work system can be adopted, as the expense of that process is inconsiderable.

VI. *The Profit.*

The profit resulting from this operation, when properly conducted, is always considerable. Mr. Wilkinson proves, by authentic documents, that all the outgoings, both capital and interest, were refunded within two years, besides a very considerable permanent increase in the value of the land.† Mr. Eyres derived great advantage from his meadow, even the first season, by pasturing on it sheep, cattle, and even cart horses.‡ Mr. Clough found that land, which, before irrigation was applied, was not worth more than six shillings per acre, was thereby increased in value to 2*l.* 15*s* per acre, even to a farmer; and if let to the inhabitants of a market-town in the neighbourhood, would fetch 3*l.* 10*s.* if not more.§

The following is the statement given, of profit from the formation of an irrigated meadow on the estate of the late Mr. Ferguson of Pitfour, in Scotland, who carried on that species of improvement with much energy and success:

1. Interest, at 7½ per cent., on the original expense of making, 10*l.* on an average per Scotch acre, ...	*l.* 0	15	0
2. The old rent of the land, . .	0	10	0
3. The annual expense, . .	0	8	0
	l. 1	13	0

The annual value being raised to 4*l.* per acre, hence it is calculated that there is a clear profit of 2*l.* 7*s.* per acre, per annum.*

A very distinct account is given of the expense and profit of a water-meadow, in the Hampshire Report. The produce is stated at 9*l.* 3*s.* 4*d.* per annum, without including the advantage of folding the sheep from the meadow, on tillage or other uplands, which is estimated to be worth 16*s.* 8*d.* more, or, in all 10*l.* The expenses, including the interest of the money expended in forming the meadow, amount to 5*l.* 18*s.* 6*d.*; leaving a balance of 4*l.* 1*s.* 6*d.* in favour of the meadow.

It is, however, contended, that neither the grass, nor the hay, produced by irrigation, contains those feeding or fattening qualities which are found in upland herbage. The stock will "hold their own," or keep to the state they were in, when put to such food; they will increase in size, but not in condition. Others will not admit to its full extent, the truth of that doctrine; and besides maintain, that the benefits resulting from irrigation are sufficiently ample to support the practice, even though its produce may not possess a feeding or grazing quality.† Nor is the pecuniary profit arising from irrigation, so material, as those indirect, or secondary advantages resulting from the system, which shall afterwards be detailed.

VII. *The Grasses best adapted for Water-Meadows.*

Where the catch-work system is adopted, the surface of the meadow is rarely much broken; the natural grasses in the ground are trusted to, and it is seldom necessary to procure any seeds, except for bare or vacant spots. When ridges, however, are formed by the spade or the plough, they are generally destitute of grass when first laid down. It is necessary, therefore, to sow the seeds of such plants as are best calculated to produce valuable and abundant crops. The most usual are: 1. *Perennial red clover*, cow, or marl grass, (*trifolium medium.*) 2. The rough-stalked meadow-grass, (*poa trivialis.*) And, 3. The crested dog's-tail, (*cynosurus crystatus.*) Timothy (*phleum pratense,*) is greatly preferred for water-meadows in America; and in boggy lands, fiorin (*agrostis stolonifera,*) is found peculiarly productive in that species of soil. Where the object is pasture, rather than hay, white clover, rye-grass, and the meadow fox-tail ought not to be omitted. The soil of itself, when watered, will produce grasses the most congenial to the state of the land and the degree of moisture applied to it; but a little manure, at the commencement of irrigation, by beds, (unless the turf has been pared, and preserved to be put upon the surface,) is thought by some advisable. In short, the superior grasses in general, will thrive under irrigation.

VIII. *The Stock to be fed on Water-Meadows.*

The advantage which a sheep farmer derives, when the climate will admit of it, by feeding his ewes and lambs *in spring*,‡ on a watered meadow, can hardly be sufficiently estimated.§ At that pinching period of the year food is always scarce, and lambs, once checked in their growth, cannot be afterwards fattened. There is an interregnum (if the

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[*] Smith's Observations, p. 26.

[†] Water is of great benefit to peat bogs, or mossy grounds, by washing away improper ingredients, as the sulphate of alum, by which that description of soil is rendered unfertile. In this way peat bogs may be enabled to produce succulent and nutritive grasses, and to rival the best natural meadows.

[*] Smith's Observations on Irrigation, p. 44. Derbyshire Report, vol ii. p. 462.

[†] Communications to the Board of Agriculture, vol. vi. p. 45.

[‡] Ditto, vol. 6, p. 329.

[§] Ditto, p. 269.

[*] General Report of Scotland, vol. ii. p. 601.

[†] Hamshire Report, p 277.

[‡] It is generally supposed, that sheep would be *rotted* by pasturing on watered meadows at any time, except *in the spring*—but in Derbyshire, there are several well authenticated instances to the contrary. *Report*, vol. ii. p. 472 and 475.—Much probably depends upon the slope, but more on the soil or water being calcareous. It is said that in Ireland, sheep and lambs are rotted on water-meadows *even in spring*, but that is not the case in England.

[§] Half an acre of water-meadow will support 1006 sheep per day, in spring.—Smith's Observations, p. 111. Wiltshire Report, p. 127.

expression may be used,) between the vegetation of one year and that of another, which is best supplied by an early crop of grass. Where this expedient is not resorted to, or where Swedish turnips, cole, or savoys, (kail,) are not extensively cultivated, the farmer may have no succulent food to give his flocks, and he will of course suffer severely. During spring, Bakewell recommends, that no heavier stock than sheep or calves should be admitted on the meadow. Much, however, depends upon the quality of the soil and subsoil, for where either consists of gravel, a farmer can feed his milch-cows during the spring, and after making a considerable quantity of cheese, may obtain three tons of hay per acre.[*] In Wiltshire, after a crop of hay is taken, it is not usual to attempt a second, unless hay is very scarce; for the grass being of a soft nature, it takes so much time to dry, that it can seldom be well made into hay: and it is of much greater value when fed with dairy cows, which may remain on the meadows till the flooder begins to prepare for the winter watering.[†] In autumn, fatting beasts, and even cart-horses, have been put on a water-meadow.[‡]

IX. *On Water-Meadow Hay.*

The grass of water-meadows being frequently large and coarse in its nature, makes it advisable to cut it young; and then, if it be well made, the hay is of a nourishing and milky quality, either for ewes or dairy cows. It has likewise been given to horses, and when properly made, they thrive upon it.[§]

It is proper, however, to observe, that from the great succulence of the herbage, the making of water-meadow hay requires a very considerable degree of attention,[‖] and that when the grass from which it is made has been over watered, or rendered impure by scum or mud; or when the hay has been ill made in the fields or injured in the stacks, it will be hurtful to any stock to which it is given: but that altogether originates from mismanagement; and it has been found by experience, that cows, if they do not fatten so well, yet give much more milk from hay produced by irrigation, when cut early, and thence having much softness and succulency, than from any hay produced from grass-lands that had not been irrigated.[**]

X. *Advantages of Irrigation.*

Where the situation is favourable the following benefits result from the practice of irrigation.

1. With the exception of *warping*, it is by far the easiest, cheapest and most certain mode of improving poor land, in particular if it is of a dry and gravelly nature. 2. Land, when once improved by irrigation, is put in a state of *perpetual fertility*, without any occasion for manure, or trouble of weeding,[††] or any other material expense. 3. It becomes so productive, as to yield the largest bulk of hay, besides abundance of the very best support for ewes and lambs in the spring, and for cows and other cattle in the autumn of every year. 4. In favourable situations, it produces very early grass in the spring, when it is doubly valuable. And, 5. Not only is the land thus rendered fertile, without having any occasion for manure, but it produces food for animals, which is converted into manure, to be used *on other lands*, thus augmenting, in a compound proportion, that great source of fertility.[*]

Were these advantages more generally known, or more fully appreciated, a large proportion of the kingdom might become like South Cerney, in Gloucestershire, where every spring or rivulet, however insignificant, is made subservient to the purpose of irrigation, fertilizing, in proportion to its size, either a small quantity, or a large tract of land.[†]

XI. *Improvements suggested in the Practice of Irrigation.*

In some recent publications on the subject of irrigation, hints are suggested, for the farther extension and improvement of that operation.

The first is, that of watering land by machinery. If the land be put in a proper form for irrigation, and supplied with a good stream, at proper seasons, there can be no difference, from the method of getting it on the surface; and if all other circumstances are equally favourable, the same fertility may be expected from water thrown up by a drain mill, as that which runs from a brook.[‡] A cheap and effectual power, for raising water in sufficient quantities, to flow about ten acres at a time, would be an invaluable acquisition; for a productive water-meadow is probably the true mark of perfection in the management of a farm.[§]

The other suggestion is, that of employing machinery to raise not only fresh, but even sea-water, for irrigation.[‖] It is well known, how much all kinds of stock are improved by salt marshes, and how beneficial to them is a moderate quantity of saline matter. There are many parts of the kingdom, where, by the aid of machinery, these advantages might be obtained at a moderate expense.[**]

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[*] Smith's Observations, p. 111.

[†] Wiltshire Report, p. 128.

[‡] Communications to the Board of Agriculture, vol. vi. p. 47.

[§] Buckinghamshire Report, p. 283; Transactions of the Highland Society, vol. iii. p. 201 and 283.

[‖] Dr. Singer has given some very judicious directions for that purpose.—General Report of Scotland, vol. ii. p. 610, &c.

[**] Berkshire Report, p. 370, note.

[††] The large water-dock is the weed that principally infests water-meadows. It ought to be carefully eradicated.—Smith's Observations, p. 40.

[*] In Davis' Wiltshire, it is calculated that 2000 acres of water-meadows will, on a moderate estimate, produce in four or five years, 10,000 tons of manure, and will keep in permanent fertility, 400 acres per annum of arable land.

[†] Gloucestershire Report, p. 280.—Watering of land, is also of use, by destroying vermin in the soil. Bakewell practised this with success in lands under tillage. Red worms were thus destroyed; and snails, and grey slugs, though they in general like moisture, and injure crops most in damp weather, yet do not agree with wetness.

[‡] Smith's Observations on Water-Meadows, &c. p. 93. The celebrated wheel, invented by Mickle, and employed for raising water to float off the moss, at Blair-Drummond, in Stirlingshire, might supply the water. Mr. Boys mentions a wind-pump, near Deal, that costs only 30 guineas, and would raise 1600 butts in 24 hours.

[§] Middlesex Report, p. 322.

[‖] Smith's Observations, p. 87.

[**] Several works are published which give practical directions for the formation and management of water-meadows: as those of Wright, and Boswell; Smith's Treatise above quoted; and Mr. Young's Calendar. In the Appendix to the General Report of Scotland, vol. ii. p. 130, there are a number of useful plans and suggestions, by Mr John Boulton, a native of Gloucestershire, who had been for seven years an irrigator there, and has since practised for above twelve years in Aberdeenshire.

INSECT IN WHEAT.

The following notices of an insect, that preys upon wheat, on certain farms in the town of Brooklyn, on Long island, which have been furnished us for publication, are contained in a letter to Stephen Van Rensselaer, president of the State Agricultural Society, &c. &c. from Samuel L. Mitchill, professor of botany, &c. dated New York, Oct. 3, 1825.

[*N. Y. pap.*

An enemy to the cultivation of wheat, unknown in these parts until now, has very lately been discovered in King's county. It is estimated that Mr. Remsen, of the Wallabout, has lost one-third of his crop by it. The destroyer is an insect which infests the grains of wheat, while yet in the spike or ear. On shelling them out early in September, and dissecting them, the larvæ was readily found in some and the chrysalis in others; nestling amidst the erosion and ruin they had formed. A hole was easily distinguishable where the wound had been made by the parent insect in the seed, while young and succulent, for inserting the egg. In this respect, there is a resemblance to the injury done the pea, in its immature state by the bug, (*bruchus.*) The ravages were committed in the sheaf, while yet in the stack or barn, and the full amount of the mischief ascertained only when the wheat was measured up, or carried to mill.

A small bundle of bearded wheat was brought by J. Remsen, Esq. from his father's unthreshed. The ears were put under a large and convenient vessel of glass, and carefully watched from time to time. Day after day imagos or perfect winged insects continued to hatch. They were the subject of repeated observations. There could be no hesitation in pronouncing them to belong to the lepidopterous order; and it seemed about as plain that in scientific arrangement they ought to be placed in the *tinea*, or "moth" family, of the *phalæna*, or "miller" tribe.

In all these particulars, the creature under consideration is sufficiently discriminated from the Hessian fly, which is a *cecidomia*, and from the weevil, which is a *curculio*. It is, however, not the *tinea granella* of the books, (called by the French, *fausse teigne des bles*,) which preys upon the grain and connects several seeds together by its web, forming thereby a sort of tunnel or tube where it conceals itself, and whence it comes forth for depredation. I have searched Count Ginannis' elaborate work upon the diseases of wheat in its growing state, (Malatie del Grano in Erba; Pesaro, 4to. 1759.) without finding such an insect as this. Our invader is about the size of a woollen moth; and of a dull tin or polished iron colour, and if the season is favourable to the evolution of the germs, comes forth while the operation of harvesting is going on.

As far as I can judge, this is the insect intended by Colonel Langdon Carter, of Sabine Hall, Virginia, in his memoir upon a creature that he denominates the *fly-weevil*. He wrote in 1768, and his tract was published in the transactions of the American Philosophical Society at Philadelphia, vol. i. p. 274, and sequel. Though dated that year, the author refers to the time twenty-five years prior, that is to 1743, for the confirmation of his statement. It is delightful to honour the memory of this gentleman. As far as an inference can be drawn from his communication, it may be comprehended in these propositions, viz:—

1. That the devourer of the wheat, is not a weevil, but a moth.

2. That it attacks the grain in its soft and juicy state, as the bug does the pea.

3. That it breaks out complete, between harvesting and threshing time, while the sheaves are in stack or housing.

4. That to avoid such destroyers of a valuable crop, there is a mode of proceeding which I transcribe with satisfaction. "At least two feet round the mow," says he, "I leave a vacancy, which is to be well trod with soft hay or beaten straw. Therefore, I keep persons constantly treading down these margins as the mow rises. And when I reach the eaves of my barn, I lay on and tread down a very thick covering of the same straw or hay; and weigh it well down at the top," &c. For the reasoning employed to his friend Colonel Lee, whom he addresses on the occasion, the agricultural inquirer is referred to the original document.

This is the animal mentioned by Dr. Mease, in Cooper's edition of Willich's Domestic Encyclopædia, (article wheat,) under the name of moth; the best means of obviating the ravages of which is said to be, threshing speedily after cutting the crop, and before it is sweated.

I have requested further inquiries and observations to be made, which I hope I may be enabled in due time to lay before you. In the mean while, for the purpose of bestowing a specific name upon the annoyer, I propose to call it TINEA SEGETIS, or moth corroding wheat in the grain, between the field and the floor. Specimens of the ripe and unshelled heads are ready for despatch to our distinguished fellow-citizens, J. S Skinner, editor of the invaluable journal, entitled the American Farmer; to Thomas Say, author of the splendid work on North American Entomology, and to Jesse Buel, whom the whole commonwealth knows as corresponding secretary of the board.

I beg you to accept, once more, my friendly salutations and best wishes.

SAMUEL L. MITCHELL.

HINTS TO WRITERS.

NATIVE CATTLE NOT INJURED BY CROSSES WITH IMPORTED BULLS.

Extract from the report of the Committee on Neat Cattle, at the late Cattle Show at Worcester, Massachusetts.

Governor Lincoln offered for exhibition three half Denton cows, all of excellent quality, but one of them particularly noticed as an extraordinary animal of her kind. She has often given from 24 to 27 quarts of milk per day, of excellent quality, yielding a large proportion of cream. The least quantity of milk given by her in any one day during the summer drought, on grass feed only, was 13 quarts! The committee considered her THE MOST VALUABLE MILCH COW, EVER EXHIBITED IN THE COMMONWEALTH.

I wonder whether they had seen the Oakes cow? Denton is a thorough bred Improved Durham Short Horned Bull.

A FULL-BLOODED YANKEE.

Worcester county, Massachusetts, Oct. 15, 1825.

PROSPECT OF CROPS.

EXTRACT FROM A CORRESPONDENT.

Cecil county, Oct. 21, 1825.

OUR crops of corn gather worse than we expected. Wheat has been sown unusually early, and remarkably well put in. Our earliest seeding is full of fly. The Watson wheat has an abundant share of them. By the bye, I am decidedly of opinion, that the northern, or New York wheat, which we are growing by the name of white flint wheat, should be distinguished as the Watson wheat. As soon as Mr. Watson gave public notice of his receiving the grain mentioned in the Farmer, Vol. vi. page 235, I wrote to him requesting a small sample of each kind; he was so kind as to comply with my request, by forwarding to General Mason, of Georgetown, a supply for me, which the General did me the favour to forward. Owing to some cause which I do not now recollect, instead of planting these small parcels of wheat on my own land, I placed them in the care of an attentive and intelligent neighbour, who drilled them with much care in his wheat field. All of the wheats failed except two varieties, a smooth red and a smooth white, both of which were freer from fly and rust, than any other plant of the field, and the successful *white*, was in every respect exactly the form and quality of the wheat sent me last year from the Seneca falls, by Colonel Mynderse The Seneca wheat is the Watson wheat in every respect. An accident arising from neglect, prevented my going on with the produce of Mr. Watson's sample.

EXTRACT TO THE EDITOR.

Belpre, Ohio, Oct. 10, 1825.

OUR wheat crop, the last harvest, was very good; but the weevil, *for the first time,* is making dreadful destruction. Is there any way to prevent them? Do they continue for any given number of years? If seed is procured from a section of the country where they are not, will they injure the crop from it?

[Who can answer satisfactorily these questions, which are of obvious importance.]

RURAL ECONOMY.

THE BEE WORM.

An insect, thus called, has been making very destructive ravages among the bees in Virginia, and in other parts of the country, by destroying them in the hive, and thus cutting off the supply of honey and wax, so comfortable, and almost necessary in rural life. A friend, who takes great interest in whatever is connected with rural economy, has furnished us with the following recipe for preventing the destructive incursions of this enemy of the bee:

"Take two boards, of an inch thickness each, perforate the one in 15 or 20 places, with a half inch auger; place this board upon the other; mark the places opposite to these holes when laid on the other board; then bore this marked board one third through, on the upper side, in the marked places, with a two inch auger; then place the board containing the small holes on top of the other, and put the hive upon them. The miller, or bee worm, when he enters the hive, seeks a place, or is interrupted by the bees, to deposite his eggs; the cavity formed as above affords a convenient place; the boards are to be removed two or three times a week, and the eggs brushed from the holes. This course will prevent the ravages of the bee worm, for it is produced from these eggs."

[It has fallen within our observation, that several persons have bestowed much care and no little expense in attempts to raise bees—in some instances, more for the amusement than the profit of the undertaking. They have had hives made of the most promising construction, to prevent the intrusion of other insects, and to save the lives of the bees; but we have heard, with regret, that all these efforts are likely to prove abortive against the destructive inroads of the vile bee worm, or bee miller, above mentioned. We have published some valuable communications on the subject of bees, especially from our New Jersey correspondent, and we shall soon publish more interesting extracts on the natural history and economy of that *millifcrous* insect.]

LADIES' DEPARTMENT.

[As the question may arise in the minds of our fair readers, "By what consideration is the Editor of the Farmer influenced to select for our department, remarks on the choice and quantity of food?" we must explain. The reason is this: Disorders of the most obstinate character, destructive of health, and often of life itself, result from imprudent indulgence in the kind and quantity of our food. The foundation of these disorders, is frequently laid in early childhood. Young people, while yet under the constant observation and control of mothers, are allowed, nay, often encouraged, in indiscriminate indulgence of their appetite, and the powers of digestion so enfeebled, that years of the most judicious medical treatment often fails to restore them.

It would be well if mothers, who thus stuff their darlings with cake, jellies, sweatmeats, sugar, meat, milk, fish, tea, hot rolls, &c. &c. would, *for one day,* keep a vessel at hand, and deposite in it the exact duplicate of all that, in their killing kindness they allow their children to eat and at night examine the *compound,* and see whether it could be digested by the gizzard of an ostrich, or one of Pappin's patent digesters, much less by the youthful stomach of a christian mortal!—and it would be well if this advice were followed by many of our male readers, "children of larger growth."

Some of the greatest men the world ever produced, have acknowledged, that to their *mothers* they were indebted for the ideas and principles that formed the substratum of their renown; almost all depend on *maternal* management and resolution for the strength of their constitution: hence it is that we shall often select for the Ladies' Department, observations connected with the physical as well as moral government of children. For those to whom the glorious destiny and high duties of a *mother* have not yet been assigned, we make selections of a different character, altogether congenial, as we hope, with good taste and virtuous minds.]

DIETETICAL REMARKS

On the Choice and Quantity of Food.

ALMOST every person who can afford it, eats more than is requisite for promoting the growth, and renewing the strength and waste of his body. It would be ridiculous to speak concerning the precise quantity of food necessary to support the body of different individuals. Such rules do not exist in nature. The particular state or condition of the individual, the variety of constitution, and other circumstances, must be taken into account. If, after dinner, we feel ourselves as cheerful as before, we may be assured that we have made a dietetical meal.

Much has been said of temperance. The fact is, that there is an absolute determined standard of *temperance,* the point of which must be fixed by every man's natural and unprovoked appetite, while he continues *in a state of health.* As long as a person who pursues a right habit of life, eats and drinks no more than his stomach calls for and will bear, without occasioning uneasiness of any kind to himself, he may be said to live temperately. The stomach revolts against the reverse of it; indeed, the stomach is the grand organ of the human system; it is the *conscience* of the *body,* and like that, will become uneasy if all is not right within; it speaks pretty plainly to those who lead an intemperate life.

"We may compare," says Dr. Kitchener, "the human frame to a watch, of which the heart is the main *spring,* the stomach the *regulator,* and what we put into it, the *key,* by which the machine is set a-going; according to the quantity, quality, and proper digestion of what we eat and drink, will be the action of the system: and when a due proportion is preserved between the quantum of exercise and that of excitement, all goes well. If the machine be disordered, the same expedients are employed for its re-adjustment, as are used by the watchmaker; it must be carefully cleaned and then judiciously oiled. To affirm that such a thing is wholesome, or unwholesome, without considering the subject in all the circumstances to which it bears relation, and the unaccountable idiosyncrasies of particular constitutions is, with submission, talking nonsense. Every man must consult his stomach; whatever agrees with that perfectly well, is wholesome for him, whilst it continues to do so whenever natural appetite calls for food."

Celsus spoke very right when he said that a healthy man ought not to tie himself up by strict rules, nor to abstain from any sort of food; that he ought sometimes to fast, and sometimes to feast. When applied to eating, nothing is more true than the proverb—

> "Bonarum rerum consuetudo pessima est."—*Syrus.*
>
> "The too constant use, even of good things, is hurtful."

It is certainly better to restrain ourselves, so as to *use,* but not to *abuse,* our enjoyments; and to this we may add the opinion of Dr. Fothergill, which the experience of every individual confirms, namely, that "the food we fancy most, sits easiest on the stomach."

What has been so far stated on the choice and quantity of food to be taken at a time, of course, relates only to persons in a state of health; the diet of the delicate, the sickly, and the infirm, must be regulated by the physician, and even the aged require particular kinds of food.

"Experience* has fully convinced me, (says an eminent physiologist,) that the latter stages of human life, are often abridged by unsuitable diet."

"The most numerous tribe of disorders incident to advanced life, spring from the failure or errors of the stomach, and its dependencies, and perhaps the first sources of all the infirmities of inability, may be traced to effects arising from imperfectly digested food."

PICKLES.

The antiseptic power of vinegar is employed with advantage in domestic economy, for preserving from decay a variety of fruits, roots, leaves, and other parts of vegetables, which by a species of refinement and luxury, are often considered as condiments to improve the relish of several kinds of food. Their qualities, no doubt, depends almost entirely on the vinegar, spice, or salt imbibed by them.

The art of preparing vinegar pickles consists in impregnating the vegetable substances with the strongest vinegar, to which are usually added a portion of common salt and the most heating spices To effect this object, the substance to be pickled is usually suffered to macerate, or slightly boiled with the acid, and afterwards kept infused in it, together with spices and salt.

It is customary to impregnate the article to be pickled first in a strong brine of common salt; but this is not absolutely necessary for the preservation of the pickled substance. To facilitate the action of the vinegar or salt, the articles to be pickled, especially such as walnuts, cucumbers, &c. should be punctured with a large needle or fork. To assist their preservation, and to improve their flavour, a variety of pungent and aromatic spices are added, which vary according to the fancy of the cook; pepper, pimento, cloves, mace, ginger, capsicum, and mustard, are the spices usually employed.

For the preparation of acid pickles, the vinegar prepared from wood, as in itself containing no substance liable to a spontaneous decay, is preferable to common malt vinegar, although the contrary has been asserted, because it is free from mucilage, which promotes the spoiling of common vinegar, and therefore the former is a better antiseptic than vinegar abounding in mucilage. We prepare our home-made pickles with this acid, and we are authorized to state, that although kept for years, they are inferior to none met with in commerce.

All pickles should be preserved in unglazed earthenware jars, carefully corked, and tied over with a bladder to exclude air. The vinegar used for preparing them should always be heated in an unglazed earthenware pan, it should never be suffered to boil, but poured over the substance to be pickled, just when it begins to simmer. The spices may be simmered with the vinegar.

PICKLED RED CABBAGE.

Put sliced red cabbage into a stone jar, and strew amongst it common salt; then heat vinegar nearly to a boiling point, and pour it over the cabbage in a sufficient quantity to cover the sliced leaves. It is customary to add long pepper, alspice, and ginger, to the vinegar, which impart to the pickle a pungent taste. A small quantity of powdered cochineal is also frequently added, with an intent to give to the cabbage a beautiful red colour; the cochineal should be strewed amongst the sliced leaves previous to the infusion of the vinegar; two drachms are sufficient to one pound of cabbage. Red beet root is employed for a similar purpose, but the former pigment, which is perfectly harmless, is preferable. When the pickle is cold, it should be tied over with a bladder skin to exclude the air.

PICKLED ONIONS.

For this pickle, the small white round onions, of the size of a child's playing marble, are usually chosen. Having peeled off the exterior brown coat of the onions, simmer them in water, till their outer layers have acquired a semi-transparency, (not longer,) then strain off the water and suffer the onions to dry; put them into an unglazed earthen jar, and pour over them so much colourless vinegar, previously heated nearly to the boiling point, as will cover them. The seasoning spices usually added are white pepper, ginger root, white mustard seed, mace, and salt.

PICKLED WALNUTS.

Take unripe walnuts; run a large needle through each in several places; suffer them to macerate for ten or twelve days, in a strong brine of common salt. When this has been done, decant the brine, transfer the walnuts into a stone jar, and pour vinegar, previously heated nearly to the boiling point, over them, in a sufficient quantity to cover them.

They may be seasoned with long pepper, capsicum, ginger, mustard seed, mace, and pimento. These substances should be simmered with the vinegar for a few minutes.

The walnuts will not be fit for use till when about six months old.

PICKLED CUCUMBERS.

Perforate fresh gathered cucumbers with a needle or fork, put them into a stone jar, and pour over them boiling hot vinegar. Season with salt, pimento, long pepper, and ginger. These substances should be simmered with the vinegar for a few minutes.

To this pickle is sometimes intentionally given a lively green colour, by copper, and numerous fatal consequences are known to have ensued from the use of such a practice.*

If pickled cucumber, or any other kind of vegetable pickle, be wanted of a lively green colour, it may readily be effected by soaking them when ready prepared, for a few minutes, first in tincture of turmeric, and then in a diluted solution of the colouring matter of indigo, dissolved in water.† This method of staining the pickle is perfectly harmless.

Samphire, French beans, tomatoes, capsicum pods, nasturtium and raddish pods, may be pickled in the same manner.

PICKLED RED BEET-ROOT.

Boil the root till sufficiently done; peel it and cut it into thin slices. Put it into a stone jar, and pour over it white vinegar, seasoned with long pepper, horse-raddish, cut into small slices, alspice, cloves, and salt.

PICKLED MUSHROOMS.

Having peeled small button mushrooms, put them in a strong brine of salt for three or four days; strain off the brine, and pour over them boiling hot vinegar: season with long pepper, ginger, and mace. [*Accum's Culinary Chemistry.*

SPORTING OLIO.

FALL MEETING OF THE RICHMOND JOCKEY CLUB.

October 18, 1825.

First Day.—Sweepstakes for 3 years old, 2 mile heats, $200 entrance, half forfeit.

Gen. Wm. Winn's b. f. Eliza White by Sir Archy,	1	1
Theo. Field's s. c. by Sir Archy,	3	2
J. J Harrison's b. c. Instructor by Virginian,	2	3

Time.—1st heat 4 m. 5 s.—2d heat 3 m. 55 s.

Second Day.—Proprietor's purse, $300, 3 mile heats, entrance 15 dollars.

Theo. Field's g. g. Mark-time, 6 years old, by Gallatin,	1	1
J. J. Harrison's b. h. Aratus by Director, 5 years old,	2	2
G. B. Autlaw's b. m. Margaret by Sir Archy,	3	4
John Baker's b. g. Elshender by Sir Hal,	4	3
W. R. Johnson's s. h. Washington by Timoleon,	5	dis.

Time—1st heat 5 m. 51 s.—2d heat 5 m. 54 s.

Third Day.—Jockey Club purse $1000, 4 mile heats.

J. J. Harrison's b. m. Betsey Robinson by Thadeus, 4 years old,	1	4	1
Theo. Field's s. m. Phillis by Sir Archy, 4 years old,	5	1	2
Wm. R. Johnson's b. h. John Richards by Sir Archy, 6 years old,	4	4	3
John Tillery's b. h. Marion by Sir Archy, 5 years old,	2	3	dis.
W. B. Wynn's b. m. Carinna by Sir Archy, 4 years old,	3	dis.	
John Armistead's s. g. Liberator by Director, 6 years old,	dis.		
John Baker's b. m. Rosabelle by Sir Hal, 5 years old,	dis.		

Time—1st heat 7 m. 59 s.—2d heat 7 m. 56½ s.—3d heat 8 m. 44 s.

[From the Annals of Sporting.]

MILITARY SPORTS IN WALES,

Worthy of imitation by the militia cavalry of the United States, which should consist of young, active, and daring men, mounted on the most beautiful and powerful horses, capable of running three miles in fifteen minutes, and of taking six leaps in the three miles, of not less than four feet high. Such horse would be really efficient. Our cavalry should be our proudest and most ambitious troops, and no drone should be admitted among them. F.

On Wednesday, 13th November, the Standhill troop of yeomanry cavalry, assembled at Monmouth for the purpose of performing two days' exercise. On the Thursday afternoon, at the conclusion of the field exercise, a hurdle race stakes was run for by Mr. John Moggridge, Mr. W. Jones, of Clythe, and Mr. Scroope, members of the troop, on their respective troop horses, the best of three one mile heats, which is once round the course and a distance. They started at the distance post, and when they came to the first leap at the winning post, they each took their leaps in gallant style, as they did the other two in different parts of the mead. In running the second heat, the three horses *bolted* together when they came to the turn in the mead which leads to the gate; but their riders brought them back to the *scratch*, and they concluded the race in a well contested manner, which was won by Mr. Moggridge. These gentlemen being persons of fortune, and well mounted, afforded a high treat to the inhabitants, who never before witnessed such a trial of speed nited with courage; bursts of applause broke from he assembled spectators on the conclusion of the port. As soon as Mr. Moggridge, who was the successful competitor, had cleared the last leap, he prang from his seat, while going at full speed, and topped the horse by holding the bridle in his hand. The pleasures resulting from the regular races did ot elicit a more joyous feeling than was manifested n this evening.

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* Carlisle on the Disorders of Old Age, pp. 2 and 27 This book exhibits an excellent view of the most suitable diet for aged, weak, and sickly people.

* Treatise on the Adulteration of Food and Culinary Poisons, 1821.—"Poisouous Pickles."

† This substance is called, at the colour-shops, intense (not liquid blue, which is quite a different preparation of indigo,) blue.

ENGLISH HUNTER.

From the time of the Normans the horse has no oubt been considered as indispensable in the pur uit of the fox at least, if not equally so in that of he hare, and a century and a half ago, only a small ortion of Arabian blood was infused into the eins of the English hunter. The horse then so ighly valued was a large bony animal, well trained leaping, and capable of enduring a long gallop: ich a horse was, at that period, well calculated for he chase, as the hounds were then much heavier, ad consequently slower, than those so highly esemed at presen . As more blood, however, was ntroduced into the hunter, the hounds were bred ore fleet; till, ultimately, such is the speed which e latter have attained, that nothing but *thorough ood*, or nearly so, can he by the side of them, and. owever highly prized the old English hunter might , such an animal would cut but a sorry figure at lelton Mowbray. It has, in fact, been found that e thorough-bred horse is not only swifter but ca ble of enduring more fatigue than the animal once celebrated as the English hunter. At first view, e latter presents a more bulky appearance, but, on amination, it will be found that all the essentials strength are better defined in the blood horse, hile, on the score of bone, the difference is not only ery trifling but will frequently be found to preponerate in the latter. Sampson, a celebrated raceorse, descended from the Darley Arabian, was supposed to be the *strongest blood horse ever seen.* He as fifteen hands and a half in height, and the adeasurement of his legs was as follows:

	inche .
imensions of the fore leg, from the hair of the hoof to the middle of the fetlock-joint,	4
rom the fetlock-joint to the bend of the knee,	11
rom the bend of the knee to the elbow, .	19
ound the leg below the knee, the narrowest part	8½
ound the hind leg, narrowest part . . .	9

Sampson was a black horse, bred by James Presn, Esq. and foaled in 1745; and that his speed was ual to his amazing strength is evident from the rcumstance of his beating all the best horses of s day.

All our best hunters are now *thorough-bred horses*, as nearly so as possible, and are far superior in ery respect to the celebrated old English hunter. owever, in the choice of a hunter, care should be ken that he is neither long-waisted nor leggy; he ould have as much bone as possible, straight pasrn-joints, and good feet; spreading haunches, good ns, and well-knit joints. He should be at least een hands high, with a lofty forehand, a good outh, and a strong gallop.

Venator.

PEDESTRIANISM.

Alfred Macgowal's match, to go 400 miles in 5 ys 12 hours, stands decidedly the first of its kind record; $888 were staked. He started, on Mony morning, September 13, to go from Shoreditch the 200 mile-stone on the road to Carlisle, and urn to London in 5 days and 12 hours; he performed half the distance in 54 hours, without fatigue. was well at this time, and confident of winning. e pedestrian refreshed at Brotherton, 21 miles on way back, at 6 o clock on Wednesday morning, and pursued a steady course of something less than 4 miles an hour, and reached Sutton at 9 o'clock in the evening. On Thursday, the pedestrian reached Stamford, and halted, at 2 o'clock in the morning, at Wandsford, rather indisposed for the first time. He, however, had time left to ease his journey, and he performed 54 miles that day to Stevenage, leaving himself 31 miles to accomplish in the 12 hours. When at Whetstone, he went to and fro, 4 miles, from the sixth to the eighth milestone, and finished the 400 miles at Kentish-town, in 20 minutes within the given time.

PRIME SHOT.

An officer of the depot at Albany, isle of Wight, engaged, for a wager, to shoot 27 birds out of 30. He hit them all, but four fell without the bounds, (100 yards,) so that he lost the match by only one bird.*

MATCH FROM FERRYBRIDGE TO LONDON.

A match was made at Newcastle races for $1332, by Mr. Futel, the owner of Corderio, that he would produce a man, within ten days, who should go on foot from Ferrybridge, Yorkshire, to Shoreditch church, 173 miles, in three days. The pedestrian, a man from the Staffordshire collieries, of the name of Patterson, started on Sunday, the 8th of August, at 12 o'clock at night, and travelled 30 miles to breakfast on Monday morning, at 6 o'clock. The pedestrian reached Tuxford to take repast, and remained there four hours, and slept at Gunnerby, 65 miles. On the second day the pedestrian went to Stamford to breakfast, dined at Alconbury, and reached Biggleswade, Herts, at 9 o'clock on Tuesday, leaving 40 miles for the third day. At 4 o'clock in the morning the pedestrian started, and breakfasted at Hatfield He reached Shoreditch church at 11 o'clock on Wednesday night, fresh and well, with one hour to spare.

PEDESTRIANISM.

On Monday evening, John Townsend, the pedestrian, (son of the Brighton town-cryer,) engaged to go six miles in one hour, in the following manner: he was to run two miles; then to walk backwards two miles; and lastly, walk two miles forwards. The place selected for this Herculean performance, was from the Pelham's-arms inn to a spot a quarter of a mile distant, on the Brighton road. He completed his task 33 seconds within the given time, as follows:

	Min.	*Sec.*
He ran the first two miles in . . .	13	0
Walked backwards the second two miles in	26	30
Walked forwards the third two miles in	19	57
	59	27

RECEIPT FOR MAKING SHOES RESIST WATER.

One pint of linseed oil, half a pound of mutton suet; eight ounces of bees' wax, and one pennyworth of rosin: the whole to be boiled together, and warmed before using.

Another.—If the shoes are new, take half a pound of bees' wax, a quarter of a pound of rosin, and one pound of tallow: to be boiled well together, and warmed before using.

N B. It is hardly necessary to mention that the shoes should be cleaned well from the dirt, and perfectly dry, before the application of either of these receipts.

Shoe-soles can have a layer of cork or waxed canvas introduced between.—This will be found a very excellent precaution.

HORSE EXERCISE.

A singular circumstance occurred at Great Marlow races: an elderly lady, who had been lame for above ten years past, was so alarmed at a horse, which she expected to run over her, that her life was for some days despaired of; she, however, recovered from her alarm, and what renders the occurrence remarkable is, that she has been perfectly free of lameness ever since.

ASNEGER MATCH.

For a wager of fifteen pounds, ($66 60,) Mr. D. Wilson, clothier, of Ipswich, undertook to drive an ass, his property, in a light gig, to London and back again, 140 miles in two days. The ass came in without the aid of a whip, at the rate of seven miles an hour, and performed the whole journey with ease. He is twelve and a half hands high, and half-bred Spanish breed.

THE FARMER.

Baltimore, Friday, November 4, 1825.

☞The next meeting of the Trustees of the Maryland Agricultural Society, will be held at Lexington, the residence of David Williamson, Jr., on Thursday next, the 10th November.

It is time that measures were taken to procure some countenance from the Legislature to such measures as may be calculated to promote the agricultural concerns of the state, and each member should attend the next meeting, prepared to suggest such steps as may seem best calculated to improve the condition of Maryland husbandry.

☞The Pennsylvania Cattle Show is said to have been attended by ten thousand persons. The most perfect decorum prevailed throughout every day.

☞For weeks to come our columns will be much occupied with the proceedings of agricultural societies, connected with their annual exhibitions. In our next we shall probably give the report of the Exhibition in Pennsylvania—and from the New England Farmer, "*Mr. Lowell's Report on fat Cattle, Bulls, and Bull Calves, with some prefatory remarks.*" Our readers know that we always insert the proceedings of that society—which we regard as the head-quarters of agricultural improvements.

The great Match Race, for $20,000 a side, between *Ariel*, a New York Eclipse filly, and *Flirtilla*, a Virginia mare, was won by Flirtilla on the 31st ult., after three severe heats. The first heat Ariel won by about a length. The first round of first heat was run in 2 min. 12 sec.; the two last rounds in 3 min. 47 sec.—which is said to be quirker than any two rounds on record in this country. Second heat, won by Flirtilla by little more than a head—time, 5 min 54 sec. Third heat, won also by Flirtilla with comparative ease—time 5 min. 54 seconds.

The Colic.—A farmer, residing at a considerable distance from medical aid, desires us to make inquiry for "the best and most *expeditious* "cure for the colic." "I have had a man," says he, "very ill with it all day, but I believe my limited "medical knowledge may bring him through, though

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* We have heard of some instances of successful shooting by gentlemen in Prince George's county, whereof we should be glad to learn the particulars. Will Prince George shoot against Anne Arundel county? We are convinced that if we could prevail on gentlemen to report accounts of their field sports, it would be found that with *dog and gun*, we can beat John Bull, "all hollow?" [Ed. Am. Far.

"slowly." This is a case that must be of frequent occurrence in the country, and a hint from some medical subscriber would be acceptable and useful. We have been wishing much to see a paper, that we believe has been read by Doctor Mease, of Philadelphia, to the Philadelphia Agricultural Society, on the accidents and disorders most incident to people employed in rural labour, and the simple remedies applicable under the exigencies of the case. We shall inquire particularly for it, and publish it, if we can get it with leave to do so.

Weevil in old Corn.—The above correspondent repeats a complaint we have before received, of the destruction of the old corn as well as wheat, by the weevil. Every year seems to bring its drawbacks on the labours of the husbandman—this seems to be the weevil year.

Warrenton, Va., 1st Nov. 1825.

John S. Skinner, Esq.,

Will some of your obliging correspondents, who can speak from experience, answer the following queries:

1. Is any power gained in working machinery with horses by applying them upon the inclined or diagonal wheel, instead of drawing by levers?
2. What is the best diameter for the inclined wheel?
3. What angle should it form with the horizon?
4. How many revolutions should it make per minute?
5. How many horses can be advantageously thus applied?
6. Do they operate merely by their weight, or do they draw also?
7. What size mill-stone can be advantageously worked in this way?
8. Will oxen answer the purpose instead of horses?

Information on these, and other points deemed material to the successful use of the improvement, will be thankfully received.

Yours, JOHN SCOTT.

Live Cattle selling for $4.50.

Tobacco.—Amount of inspections in the state warehouses, during the last week—Warehouse, No. 2, 21 hhds.—Warehouse, No. 3, 50 hhds.—Total, 71 hhds.

RARE LEXICONS, POLYGLOTTS, DICTIONARIES, AND ECCLESIASTICAL HISTORY, &c.

William A. Colman, No. 86 Broadway, New York, has just received a great variety of valuable works, in almost every language, which he offers for sale from 50 per cent below, and not to exceed 12½ per cent above the London prices—even his new theological works in English Among the Latin and Greek books will be found five different editions of the Scapulæ Lexicon, in folio; 14 different Lexicons in quarto and octavo—in Syriac, Hebrew, German, Latin, Greek, &c. Dictionaries, in seven, ten, and twelve languages,—many of which are very rare, and dated 1550, 1557, 1561 and 1616; Polyglotts—he has many copies, from 10 vols. folio, (Le Jay,) down to 2 vols. folio; two copies of the Polyglott Testament, in twelve languages, very rare;—Concordances, in many languages—in folio and quarto. *Also*, the complete works of—

Hieronymus, 13 vols. folio, splendid.
Do. 11 vols in 4, folio, 1684.
Hippocrates, Opera Omnia, Greek and Lat. fol. 1621.
Homeri, Opera Omnia, Græcæ, folio, 1551.
Erasmi, Roterdami Adag. Chil. folio, 1551.
Josephus, in Hebrew, Latin, and Greek, three different editions, folio.
Melancthon, Opera Omnia, 4 vols. fol. *original edition.*
Dionysii, Opera Omnia, Argent, 1502, folio.

Also, Augustin, Martin Luther, Puffendorff, Boerhaave, Herneccius, Grotius, Fleury, &c. &c. Many rare Missals and Breviaries, and 158 different editions of the Bible, from 1513 to 1779, of which some are most rare;—of the editions of Aldus, Elzevir, Stephens, Plantin, and Froben, there are many.

Besides the above old Latin and Greek works; he has 2000 volumes of the late editions of the classics, in 8vo. 12mo. and 16mo. the second edition of Jones' Greek and English Lexicon, in calf, extra, very cheap—and Hederici Lexicon, Lon. ed. calf, extra, *for ten dollars.*

Also a general assortment of miscellaneous works, in English, French, Spanish, Italian, &c. all which may be had for a small advance, for cash.

FRUIT TREES.

Having ordered Fruit Trees for some of our friends, from such nurseries as wo have seen the fruit and trees of, and in addition to orders received, have sent for about 1600 Apple, Peach, Pear, Plum, Apricot and Cherry Trees, all assorted; and from which we think a selection may be made to suit the wants of most people the year round.

These trees may be expected to arrive here in a few days, packed in such order as to insure their growth, though they should be ordered to be transported to a considerable distance; and as it is not convenient to furnish catalogues to those who live at a distance, they will please order the quantity of each sort they desire, and name the purposes for which they are intended, and we will make as judicious a selection for them as from our experience we will think best suited.

Ploughs, Wheat Fans, Corn Shellers, and garden and field Seeds, as usual.

SINCLAIR & MOORE,
near Pratt-st. wharf.

11th mo., 4th, 1825.

STOCK AND FARMING UTENSILS—FOR SALE.

The subscriber, intending to remove from his Farm, and decline the business, will sell, without reserve, at public sale, at 10 o'clock, on Tuesday, the 15th of eleventh month (November,) all his stock, consisting of 45 Milch Cows, chiefly full blooded, of the *Holstein* and *Teeswater* breed—and all of them with calf by a first rate full blooded Holstein Bull, of the famous stock of John Hare Powel, Esq. The Bull will also be sold.

The above Cows have been for a short time kept for the dairy, and many of them will give 20 quarts of milk per day; and they will nearly all be ready for the dairy in the month of February next.

Twenty Heifers, of the full blooded Holstein breed, of different ages, all in complete order.

Fifty Bakewell Sheep, of superior qual.ty, carefully selected and improved, of the *best blood*, either for the production of wool or weight of carcass, that our country affords.

Horses and Colts—the Colts bred from the full blooded horses *Hickory* and *Oscar*.

Twenty Hogs, all thriving Shoats, of the *Russian* and "*no bone*" breed.

Farming Utensils, of different kinds, viz:—Hay-Wagons, Dearborns, Ox Cart, Horse Cart, Ploughs, Hasrows, &c.

This sale will give farmers and graziers an opportunity to supply themselves with the best selected stock in the country—and it may be long before another such opportunity will occur.

ISAAC CLEMENT,
Near Port Penn, Delaware.

10th mo., 20, 1825.

CONTENTS OF THIS NUMBER.

Prize Essay on the use of Oxen, and their value in comparison with Horses for agricultural purposes in the middle and southern states, to which was awarded the premium plate offered by Charles Carroll, of Carrollton, with cuts, by Thomas P. Stabler—Sir J. Sinclair on Irrigation, concluded—Dr. S. L. Mitchell on the Insect in Wheat—Hints to writers on Native and Imported Cattle—Prospect of Crops in Cecil county, Maryland, and Belpre, Ohio—How to prevent the attacks of the Bee Worm—Dietetical Remarks on the Choice and Quantity of Food—Recipes for making various kinds of Pickles—Richmond Jockey Club Races—Military Sports in Wales—English Hunter—Pedestrianism—Match from Ferrybridge to London—Great Walking and Running—Receipt for making Shoes resist water—Editorial—Inquiries respecting horse mills—Advertisements—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	6 00	9 00		
BACON, and Hams, . .	lb.	7	10	11	
BEES-WAX, Am. yellow	—	32	34		
COFFEE, W.I. Green, .	—	18½	20	22	
do. Common,	—	16½	17½	18	
COTTON, Louisiana, &c.	—	20	23		
Georgia Upland, . . .	—	16			
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	
Dipt, ...	—	10	11		
CHEESE, ...	—	8	10	12	
FEATHERS, Live, . . .	—	33	34	37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	3 50	
Shad, trimmed,	—	6			
FLAXSEED, Rough, . .	bush	1	1 12		
FLOUR, Superfine, city,	bbl.	5 00	5 50	6 00	6
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	4 50	4 75	none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	58	55		
Wheat, Family Flour,	—	1 05	1 15		
do. Lawler, ...	—	90	1 00		
do. Red, ...	—	85	95		
Buckwheat, ...	—	55	75		
Rye, ...	—	55	60		
Barley, ...	—	80			
Clover Seed, Red . .	—	5 00	5 50	6 00	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25	2 50		
Oats, ...	—	32	35		
Peas, Black Eyed, . .	—	95	1		
Beans, White, ...	—	1 37½		1 62	
HEMP, Russia, clean, .	ton	200			
HOPS, ...	lb.	28	30		
HOGS' LARD, ...	—	10	11	12	
LEATHER, Soal, best,	—	27	28		
Eastern Tan, ...	—	23	25		
MOLASSES, W. India,	gal.	37	40		
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7	8	9	
NAVAL STORES, Tar,	bbl.	1 87½			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2	2 12		
OIL, Whale, common, .	gal.	30			
Linseed, ...	—	80	83		
PORK, Baltimore Mess,	bbl	14 50		15 50	
do. Prime, . . .	—	10 50	11 00	12 00	
PLASTER, cargo price,	ton.	5	5 37½		
RICE, fresh, ...	c.lb.	3 00	3 50	5	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	
WHISKEY, 1st proof, .	gal.	28½	29	38	
PEACH BRANDY, 4th pr	—	60	1 00	1 25	
APPLE BRANDY, 1st pr	—	34		50	
SUGARS, Havana White,	c.lb.	13 50		15 00	16
do. Brown, . .	—	11 00			
Louisiana, ...	—	10 00	11 00	11 50	12
Loaf, ...	lb.	19	22	20	
Lump, ...	—	16	18	19	
SPICES, Cloves, ...	—	80	85	1 00	
Ginger, Ground, . . .	—	7		10	
Pepper, ...	—	18	18½	25	
SALT, St. Ubes, ...	busb	42	45		
Ground Alum, . . .	—	52		62	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 25		
Lisbon, ...	—	1 20	1 25	1 50	1
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwash but free tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	38	35		

Printed every Friday, at $5 per annum, for JOHN SKINNER, Editor, by John D. Toy, corner of Paul and Market streets, where every description Book and Job Printing is handsomely executed.

AGRICULTURE.

THE PENNSYLVANIA AGRICULTURAL SOCIETY,

Held their annual meeting on the 19th, 20th, and 21st inst. at Prospect Hill, in Philadelphia county.

The exhibition of live stock, the trials of ploughmen and of animals at the plough—the competition in sheep shearing—the display of fine Arabian, turf and draught horses, afforded more variety, and created greater excitement than had been on any similar occasion observed.

The Committee on *Neat Cattle* report, that they consider the following persons entitled to premiums:

John Hare Powel, for the best bull, not less than one year old, a piece of plate, worth $50
For the improved Durham short horn bull Beau. Premium relinquished.
James Cox, for the next best plate, . 40
For the I. D. S. H. bull Blyth.
Geo. W. Sargeant, for the next best plate, 20
For the I. D. S. H bull Monk.
John Hare Powel, for a bull calf, not more than one year old, plate, . . 15
For the I. D. S. H. bull calf, Ohio. Premium relinquished.
John Hare Powel, for the best cow, not more than 7 nor less than 3 years old, plate, ... 40
For the I. D. S. H. cow Lady. Premium relinquished.
John Hare Powel, for the next best, plate, 25
For the I. D. S. H. cow Belina. Premium relinquished.
James Cox, for the next best plate, . 10
For the I. D. S. H. cow Cora.
John Hare Powel, for the best heifer not more than 3 nor less than 1 year old, plate, ... 20
For the improved D. S. H. heifer Lydia. Premium relinquished.
John Hare Powel, for the next best, plate, 10
For the I. D S. H. heifer Coquette. Premium relinquished.
James Cox, for the next best, plate, . 5
For the I. D. S. H. heifer Rose.
John Hare Powel, for the best heifer not more than 12 months old, plate, . 20
For the I. D. S. H. heifer Lucy. Premium relinquished.
John Hare Powel, for the next best, plate, 10
For the I. D. S. H. heifer Margaret. Premium relinquished.
John Hare Powel, for the next best, plate, 5
For Mary, of Durham short horn and Sussex blood. Premium relinquished.
John Hare Powel, for the best thorough bred improved Durham short horn bull, plate, ... 50
For Wye Comet. Premium relinquished.
John Hare Powel, for the best thorough bred improved Durham short horn cow, not less than three years old, plate, ... 30
For Shepherdess. Premium relinquished.
John Hare Powel, for the best thorough-bred improved Durham short horn heifer, plate, . . . 20
For Yorkshire Belle. Premium relinquished.

All Improved Durham Short Horns, from Mr. Powel's stock, except Mary, half short horn, half Sussex breed.

THOS. SMITH,
THOS. SERILL,
JAMES COX,
GEO. BLIGHT,
Committee.

The foregoing premiums, awarded to John Hare Powel, amounting to two hundred and ninety-five dollars, have been relinquished. GEO. BLIGHT,
Treasurer of Pennsylvania Agricultural Society.
October 27, 1825.

The Committee for *Sheep* and *Swine*, report, that they consider the following persons entitled to premiums:

William J. Miller, of Philadelphia county, for the best ram, not less than two years old, a piece of plate worth . . . : $10
For his imported Saxon ram.
For the next best, ... 5
For the next best, . . . 5
Charles Kuhn, of Philadelphia county, for the best ram not more than two years old, a piece of plate, worth . . . 7
For a ram from his merino flock.
For the next best, plate, . . 5
For a ram from ditto.
Henry L. Waddell, of Bucks county, for the best pen of merino ewes, not less than five in number, a piece of plate, worth . 10
For the best merino ram, plate, . . 10
For the best pen of merino ewes, not less than five in number, plate, . . 10
John Hare Powel, of Philadelphia county, for the best ram of Dishley blood, not less than two years old, a piece of plate, worth 10
For the best ram of Dishley blood, not more than two years old, plate, . . 7
For the best pen of Dishley ewes, not less than five in number, plate, . . 10
For the best ram of Southdown blood, a piece of plate, worth 20
For his imported ram.
For the best ewe of Southdown blood, plate, 20
For his imported ewe.
For the best broad-tail ram of mountain Tunisian blood, plate, . . . 10
For the best broad-tail ewe of mountain Tunisian blood, plate, . . . 10
Reuben Haines, for the best boar, not less than eight months old, a piece of plate, worth 10
Charles Kuhn, for the next best, plate, . 5
David Woodington, for the best sow, not less than eight months old, . . . 5
John Finlayson, for the next best, . 3
For the best pigs, not less than five in number, not more than eight months old, 5

The committee further submit, that although they recommend the above animals, as entitled to premiums, they consider Mr. Leffert's ewes and ram, Mr. Worth's ewes and ram, Mr. Samuel Cox's ewes and ram, all of Dishley blood, as fine specimens of their breed.

Mr. Case's pen of Dishley ewes was much noticed.

Mr. Wilson and Mr. Wynkoop exhibited pens of merinoes, of good size and in fine condition.

Mr Reading, of New Jersey, presented *two very fine* merino sheep.

The committee have the satisfaction to state, that they have on no occasion witnessed a display of finer stock of the kind.

Mr. Rees' boar, of eleven months, was of remarkable size.

Mr. James Cox's sow, of four years, and Mr. Samuel Cox's boar of the same age, of mixed Suffolk breed, are deemed well entitled to notice.

HENRY L. WADDELL,
JNO. WILLCOX,
JONATHAN ROBERTS,
WM. HARRIS,
WM. DARLINGTON,
Committee.

The Committee on *Horses* report that they consider the following persons entitled to premiums:

Edward Parker, for the best thorough bred horse, not less than three years old, a piece of plate, worth $50
For the horse "John Stanley."
Joseph Kersey, for the best horse, fitted for draught, not less than three years old, a piece of plate, worth . . 25
For Chester County Bay.
William Wallace Cook, for the best filly, not more than three years old, a piece of plate, worth 10
For Rarity.

A premium having been offered for the "best thorough bred horse," which in the general acceptation of the term, in this country, is applicable *only* to the race called *turf horses*, your committee are constrained to regard the strict letter of the premium bill, and thus cannot take into view the beautiful and high bred Arabians, which on this, as on former occasions, have commanded admiration wherever they appeared. They are aware that their predecessors have not acted upon this rule; yet they conceive, as there are thorough bred Cleveland bays, thorough bred barbs, and thorough bred horses of various denominations, there can be no hesitation in the minds of the directors, as to the construction, which they have given to the society's intention formally proclaimed in their bills. No Cleveland bay having appeared, they venture to recommend that an honorary premium of a cup worth 25 dollars, be presented to John G. Watmough, for Abdallah,* and that a cup of the same value be presented to John Watson, for Brown Highlander, as they conceive that the symmetry, *breeding*, activity, and *strength* of these horses, more nearly approach the characteristics of the animal called Cleveland bay, than any which have been brought into their view.

JOHN HARE POWEL,
RICHARD B. JONES,
JNO. G. WATMOUGH,
REUBEN HAINES,
Committee.

JOHN ALLEN, *Assistant Judge.*

The Committee for *Oxen at the Plough* report, that the following named individuals contended for the premium for the best pair of working oxen, viz:

B. Larzalere, of Bucks county, William Harris, of Chester county, John G. Watmough, and Mordecai R. [illegible], of Montgomery county, and Thomas F. Ashton, of Philadelphia county; and that they consider Dr. Wm. Harris entitled to the premium of "a piece of plate worth 50 dollars, for the best pair of working oxen, above 6 years old, reference being had to their performance at the plough," one-eighth of an acre of hard old sward having been accurately ploughed by them, six inches deep, in 21 minutes, without a driver.

JOHN WILLCOX,
GEO. BLIGHT,
JAMES WORTH,
JONA. THOMAS,
Committee.

The Committee for the trial of *Draught Horses*, beg leave to report, that they recommend the award of the premium for the best pair of draught horses, reference being had to their performance at the plough, to Guy Bryan, of Philadelphia county, a piece of plate worth 25 dollars. Nine persons having entered.

JOHN WILLCOX,
WM HARRIS,
THOS. SMITH,
JONA: THOMAS,
Committee.

The Committee for the trial of *Ploughmen with Oxen* beg leave to report, that they recommend the award of the premium for the best ploughman with oxen, to Thomas F. Ashton, of Philadelphia county—30 dollars. Six persons having entered.

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* Col. Watmough was originally on the Committee for Horses. He peremptorily refused to serve, but was persuaded to act, upon condition, that no opinion should be required from him in relation to horses for quick draught, in which only his interest could be concerned. A similar course was observed by Judge Jones, who by his vote upon the question, as to the "thorough bred horse," excluded his own, although as high bred an Arabian as any that can be shown.

JOHN WILLCOX,
THOS. SMITH,
JONA. THOMAS,
GEO. BLIGHT,
Committee.

The Committee for the trial of *Ploughmen with Horses* beg leave to report, that they recommend the award of the premium for the best ploughman with horses, to Samuel Beaver, of Chester county—30 dollars. Nine persons having entered.

JOHN WILLCOX,
WM. HARRIS,
THOS. SMITH,
JONA. THOMAS,
Committee.

The Committee on *Sheep Shearing* consider David Tappan entitled to a premium of 5 dollars.
Five persons having entered.

MATTHEW ROBERTS,
Chairman.

The Committee on *Domestic Manufactures* recommend the award of the following premiums to the persons respectively named:

For the best blankets, to Mrs. Elizabeth Worth, of Bucks county, . . .	$10
For the second best, to Mrs. Dr. Harris, of Chester county, ...	5
For the best piece of damask table linen, to John Finlayson, ...	5
For the best carpeting, not less than 30 yards, to Mrs. Hepzibah Thomas, of Bucks county	10
For the second best, to Mrs. Barnitz, of York county, ...	5
For the best hearth rug, to Miss Ann Taylor, of Bucks county, ...	5
For the second best, to Miss Ruth Thomas, of Bucks county, ...	4
For the best cotton shawl, to the pupils of the Pennsylvania Institution for the Deaf and Dumb, ...	5
For the best cider, not less than 30 gallons, to Mr. John Teaster, of Bucks county,	10

The committee have to regret, that the woollen knit hose manufactured by Mrs. Kersey, of Chester county, were not received in time to enable them to do justice to their merits.

Several samples of domestic wine were exhibited, which were esteemed excellent of their kind.

Mr. Bonsall, of Germantown, exhibited his grape and currant wine, of equal quality to the wine which took the premium last year.

A sample of some very fine currant wine, was presented by Mrs. Waddell, of Bucks county.

STEPHEN DUNCAN,
GEO. BLIGHT,
JONA. THOMAS,
REUBEN HAINES,
Committee.

The Committee on *Implements of Husbandry* report, that they recommend the award of a premium of 5 dollars, to Samuel Kirk, of Philadelphia county, for a machine for paring apples.

A number of implements, adapted to the various purposes of husbandry, were exhibited, which displayed considerable ingenuity; although no improvements appeared to the committee, to be of such character as to justify them in recommending the award of any premium.

WM. DARLINGTON,
JONA. THOMAS,
STEPHEN DUNCAN,
Committee.

In addition to the implements inspected by the committee, various articles were sent by Mr. Powel, merely for exhibition.

The foregoing reports having been presented to the Directors, were unanimously accepted, and the awards were accordingly proclaimed.

JOHN P. MILNOR,
Recording Secretary.

In addition to the animals which were entitled to premiums, the Directors noticed with great satisfaction an hundred and ten horned cattle of various breeds: some of them exhibiting by their points, symmetry and early maturity, great improvement, evidently arising from the increased attention which has been within a few years excited towards this important object of the husbandman's care. They were much attracted by Mr. Blight's, Mr. Morris' and Mr. Hamilton's cattle from Philadelphia county.

To Mr. Wynkoop, Mr. Feaster, Mr. Worth, Mr. Hart, Mr. Paxson, Mr. Waddell, and Mr. Thomas, of Bucks county; Dr. Harris and Mr. Davis, of Chester county; Mr. Roberts and Mr. Matthew Roberts, of Montgomery county, the Society were indebted for important additions to their show.

Besides the Sheep for which premiums could be awarded by the terms of the bill, more than two hundred were presented, many of them characterized not merely by excellence of fleece, but by fine forms and every mark of healthful and vigorous constitutions. This remark is particularly applicable to Mr. Kuhn's merino flock, which, by careful selection and skilful management, have been brought to attain a degree of *size and symmetry* in carcass, rarely exhibited by merino sheep in this or in any other country.

Although the display of Stud Horses quite equalled the expectations which the Directors had formed—the deficiencies in form, bone, size, and action, which are evident in most of the females, lead them to apprehend, that without increased attention to the selection of brood mares, no permanent improvement can be expected in their offspring, however excellent the sires may be in every point and characteristic to be desired.

Thus whilst they consider themselves much indebted to the gentlemen who have gratified them by sending mares to the ground, they conceive themselves bound to adhere to the restriction announced in the bills, and therefore have caused the premiums for brood mares, as none appeared "worthy of distinction," to be withheld.

By offering a premium for thorough bred horses, it was not intended to promote the introduction of animals for the turf, but merely to put within the reach of Pennsylvania farmers, the kind of horse, which a majority of the Society consider best adapted to improve the races employed for quick draught upon the road.

JOHN HARE POWEL,
Corres. Sec'ry Penn. Agricultural Society.
Philadelphia County, Oct. 27, 1825.

After having witnessed the success of their efforts, not only in the extent of the exhibition, but in the interest manifested by a vast assemblage of respectable farmers, the Society heard from Dr. Darlington, an ingenious and instructive address; and adjourned to the Red Lion, to receive Mr. Sergeant, Mr. Hopkinson, Mr. Walsh, Mr. Ingham, Mr. Brent, of Washington, Mr. Barnitz, of York, the members of the Legislature from the city and county, and other gentlemen whom they had invited, to honour them with their company at dinner.

[We are authorized to state, that "the breeding Neat Cattle, in number 110, far exceeding in excellence, any former display in Pennsylvania, comprised the best individuals which could be produced of "native" New England, New York, Kentucky, and various mixed races of Hamburg, Holstein, Dutch, Devon, and Alderney breeds, yet not one of *them* took a premium."—Ed. Am. Farm.]

[From the New England Farmer.]

BRIGHTON CATTLE SHOW.

No. I.

Mr. Lowell's Report on Fat Cattle, Bulls, and Bull Calves, with some prefatory remarks.

Brighton, Mass. October 19, 1825.

The committee of the Trustees of this Society, appointed to make the arrangements of our annual festival, desirous of *economizing* the time of the public, proposed some material and important changes with this view. Among the rest, they determined that it was inexpedient on the first day of the Cattle Show to have *any* ceremonies or *public* address. These were found to consume so much time, that it was almost impossible for the committees to perform their duty with that ease and intelligence, which justice to the competitors seemed to require. No time sufficient for the purpose was left for deliberation, and the preparation of the Reports. By the suppression of the ceremonies and Address, they were enabled to make the trial of working cattle on the *first* day, which is a great convenience to competitors. It was hardly fair, and certainly not humane, to suffer the animals which had been employed in the ploughing match, to proceed *instantly* to the trial of their strength and skill in drawing heavy weights, and in the various movements necessary to form an opinion of their powers and training.

Another benefit was contemplated by the change. The collection of such a concourse of people, and such a concurrence of fine animals, seemed to offer a fit occasion favourable to the seller and purchaser, for a fair or auction of cattle, and of other objects presented for show. Hitherto this sale being on the second day, not only obliged the owners of animals and of goods intended to be sold, to remain at great expense to await the auction, but as the collection of persons who might be purchasers was much smaller on the second day than on the first, much, if not the greater part of the benefits proffered by this fair were lost. The animals and the goods were, (it was feared) often sacrificed, and thus one of the objects contemplated was in a great degree frustrated.

We hope that the change will prove beneficial, though it can only be tested by experiment.

In conformity with the same views of economizing time, the committee proposed that the reading of the Reports of the several committees should be dispensed with, and they publicly announced that the *list* of premiums *only* should be read, and the whole proceedings should be closed by an *extemporaneous* address from the President. To this last suggestion I have always felt an invincible repugnance. It is true that on most of the preceding anniversaries of the Brighton Show, I have made some cursory and unprepared remarks, but I have since thought that the practice ought to be discontinued. If any remarks which an individual should or could suggest on such a public occasion, in which we are honoured by the attendance of farmers, manufacturers and other citizens, from all parts of the state, *could* be worthy of their attention, it surely would be more respectful as well as more useful, to devote some *little previous* thought, to make them so. I agree that they should not be elaborate,—that they should be familiar, simple, easy, natural. They should partake of the character of oral or extemporaneous communications. They should not be such as ought to be fair subjects of criticism, except with respect to the *thoughts;* those must and ought to be subject to strict examination. There are unquestionably some highly gifted minds, whose *first* thoughts are so *sound,* and whose mode of expressing them extemporaneously is so happy, that no painful feelings are excited from the hesitation or confusion of the speaker. But it seems to me that the topics of agriculture and manufactures do not afford scope for any display of eloquence, and that any effort to bestow ornament upon them is much worse than lost. To speak fluently and persuasively on *any* subject, we must be *excited in some degree above our natural and ordinary tone of feeling.* We *can* be so excited as to great *moral* and *religious* truths. We *can* be so excited at the bar, when the lives, fortunes, and reputation of our fellow men are at stake. We can *scarcely fail* to be so *excited,* when in legislative assemblies we are discussing the great interests of a state or nation: but how is it possible to raise our feelings to the lowest strain of eloquence, when we are descanting upon the comparative merits of various races of cattle, or different modes of culture of the soil?

It seems to me impossible. But if it were possible to *others,* it is not to the individual who now addresses you; who feels, that he never possessed that power, *that rare* and *almost supernatural gift,* sometimes *dangerous* in *its exercise,* of influencing the opinions of others by *original thoughts,* rapidly expressed in *glowing and kindling* language.

The great object of this, and of all the other almost innumerable societies throughout Europe and America, (and their influence now extends to nearly 100 millions of people,) is to encourage improvements in agriculture, and the mechanic arts closely connected with it, particularly domestic productions in private families—not that we feel indifferent to the success of those extensive and splendid *joint stock* companies, which by underselling the productions of foreign countries, open a wide field for the encouragement of our industry; yet our *peculiar* province is to encourage the promotion of improved modes of culture, to enable these old and highly populous states to retain their excellent, well educated population at *home,* rather than to force them abroad to acquire a precarious support in new countries, at the sacrifice of health, and in some cases of subsistence. Such are the legitimate, wise and reasonable objects of all our agricultural associations in New England. We know very well, from the example of Great Britain, that New England alone is capable of sustaining a population of 16 millions instead of two. We are convinced, that by remaining *at home,* much more and greater personal comfort will be secured to the individual—much greater opportunities afforded for literary, moral and religious instruction. It is therefore our first duty, by all the means in our power, to render our section of the country a desirable place of residence to our population. Nobody has a right to *quarrel* with us for attempting to make that population happy and prosperous, and for affording them inducements to stay at home. When *we emigrate,* they sometimes laugh at us for our sharpness and shrewdness, the necessary result of our superior modes of *early* education. Surely they who so complain, will find no fault, if by improving our farms, by increasing the amount of purely domestic productions, and by availing ourselves of the advantages which God, the author of all good, has purposely given us, of our excellent *mill* privileges, we attempt to check the emigration of our citizens towards other states, where their *superior sagacity* is deemed *cunning,* and their *superior* industry is sometimes branded with the opprobrious names of *avarice* and *overreaching.*

It is, it appears to me, time that New England should take care of itself, instead of permitting its territory to be depopulated by emigration. It is by the fair and active use of the proper means to accomplish this most desirable end, that New England, if it shall persevere in the present energy and intensity of its exertions, will bear to the other portions of the United States, in fifty years, a proportion far greater than it has hitherto borne.

It is pertinent in this view for us to consider what have been the moral and political means, which have raised Great Britain to its present high state of productive industry. I cannot give you a better nor a more condensed view of that state, (I might almost call it a miraculous change,) than by a very short notice introduced into the *Edinburgh Observer,* and copied into that excellent work, the American Farmer, edited by a man of strong powers of mind, John S. Skinner, Esq.

"In seventy years, the people of Great Britain have advanced full eight millions in number. Fifty years ago the very existence of canals was matter of incredulity, (recollect that this was so late as the commencement of the war with her colonies here, and that she has been engaged in 30 years of expensive warfare since that period,) sixty-six millions of dollars have since been expended on canals, and at least half as much more are now devoted to new, unfinished projects of this description. Fifty years since, there was scarcely a steam engine in the country; there cannot now be less than 12,000: a creation of power at least equal to the labour of 250,000 horses—an energy which, in a single day, would have erected the greatest pyramid of Egypt, heretofore the astonishment of mankind. Fifty years since, the export of manufactured cotton did not amount to a million of dollars; it has now swollen to 133 millions of dollars. In the same period, the exported manufactures of woollen goods, in defiance of Saxon, Prussian, Spanish, and American competition, have advanced more than eight millions of dollars. Fifty years since, the imports into England of new silk, were only 250,000 lbs. in weight, they are now nearly 30 millions. Fifty years since, they exported only four millions of yards of linen goods; they now export forty millions. Fifty years since, their whole exports were only 66 millions of dollars; they are now 222 millions."

Our own history would show, perhaps, as great and honourable a change, but it is *still vastly inferior to theirs,* in proportion to our *comparative population* Our exports of domestic productions not exceeding 55 millions, and theirs being 222 millions—ours being to theirs only as 4, while our *population is to theirs* as 11 to 16, or two-thirds.

It is important to us, and to all nations, to know from what cause this rapid increase of British industry has been derived. No doubt from superior capital in the *first* place; from the employment of the lights of science in the *second*—but among the other causes, must be reckoned as not unimportant, the encouragement given to individual skill and talent by their grand national society of arts and manufactures. That society has seduluusly watched over the general interests; it has fostered every new invention; it has brought into public notice the retiring and modest inventor; it has recommended his discovery and rewarded his skill, not merely by its pecuniary aid, but by attracting public attention to *his merits.*

The same effect has been produced upon agriculture by similar measures. It is perfectly idle to attribute simply to *increased demand,* the rapid progress which that nation has made in the productions of its soil. It is of very little importance whether it is, or is not admitted that *science* has done *much* for agriculture, (though I believe it has effected more than is generally believed,) but the attention to it, the exertions of those who have promoted it, not *for profit,* but from *patriotic* and *public* motives, have done incomparable good. It would be as absurd to deny that the human intellect cannot, when applied to agriculture, effect important and valuable improvements, as it would be to contend, that it could not improve the *other* arts. Agriculture, to be sure, is not as susceptible of improvements by machinery, as its sister arts; but the range of its *objects* of cultivation may be indefinitely extended, and improvements may be made, and have been made in the culture of *these new objects.* It is not generally known, that the cabbage, and the carrot, and the Swedish turnip, and the beet and the most valuable varieties of the latter, the mangel wurtzel, and the yellow, and sugar beet, are altogether of modern introduction; so modern that our excellent ancestors had never heard of them; could not have heard of them, because they did not exist.

I will not detain you on the subject of *fruits,* because it has, at present, but a limited interest. I am, however, much amused, when I hear one of our farmers who supply the Boston market with fruit, undervalue the services of the *gentlemen* farmers, when it is demonstrable that to their exertions they owe many of the good fruits which they possess, and while they carefully watch *their* progress, and avail themselves of *all their improvements in the culture of them.* This is perfectly natural; but it is highly proper that on public occasions, we should advert to the undoubted benefits, which science and superior capital have introduced.

Is there one farmer among those, whom I have the honor to address, who knows that clover is one of the trophies of agricultural science? that it was *utterly unknown* in England at the time of the emigration of our ancestors? I hope there are none, who are so ignorant as to believe, that the potato was a *native* production, or that it cost vast and continued efforts to overcome the prejudice of the farmers against it. Yet banish the potato, the result of commerce and science, and you would at once deprive Massachusetts of a plant worth some millions of dollars annually; and if Ireland should be deprived of it, a famine would instantly ensue.

Shall we allude to the cotton plant? No. Our northern farmers *feel not* its importance, *except indirectly,* in the cheapness of the excellent cloth manufactured from it; in the general increase of wealth from its manufacture; in the building up of new towns in the interior, forming new and valuable markets for their products at enhanced prices, and with less labour and expense of transportation.

Yet you owe the *cotton plant* exclusively and entirely to intelligent men—*book men,* who were not practical farmers; a plant which yields to this country a greater revenue than all its other productions of the sea and of the land.

We now come to some of the direct and undisputed benefits derived from this *particular* Society. Col. Humphreys introduced some merino sheep. His situation as minister to the court of Portugal enabled him, and he wisely and patriotically availed himself of the opportunity to introduce a few merino sheep. This Society, alive to the interests of agriculture, granted him their gold medal. It was not so much to him, the value of the present, as the evidence it afforded of the importance of the acquisition, thus enabling him to put a high price on his sheep. Col. Humphreys kept his sheep, as he had a right to do, for his own *private* emolument. A few years afterwards, Mr. Livingston, our minister to France, had credit enough with the Emperor, to obtain some of the merino race from the imperial flock of Rambouillet. He, too, as he had a *right to do,* turned his importation to profit, and the price of $3000 for a single ram, excited the attention of *our* Society; and knowing, as we did, that they could be bought in Spain for $10, of the purest breed, we offered premiums of $100 *each, for rams and ewes.* They came in great numbers, as we anticipated. There was a foolish rage, in the *first* instance, perfectly absurd in itself, but always inevitable in such cases. It ended, just like the late absurd speculations in cotton, in disappointment and disaster; and the merinoes fell into a disrepute as irrational as had been the extravagant rise. But time and good sense, and experience, those sound counsellors which never deceive us, but which always settle human affairs on their true and solid foundation, soon raised the merinoes to their merited rank; and it may now be safely expected, that never did any society more wisely and judiciously expend its money for the benefit of any country, than ours has done by granting a medal to Colonel Humphreys in the first instance; and finding that he and Mr. Livingston adopted the very fair and justifiable project of a *monopoly*, and a very *restricted* one, by offering premiums for *new importations*, which it can be *proved* by our records induced the importation of many thousands. Let us then enjoy a due credit for our exertions. We ask *no more.* It is a curious fact, worthy of notice in the history of agriculture, (and commerce and manufactures can exhibit many as curious,) that the merino sheep became in this country at one time so odious, so much of a *bye-word,* that those who had adventured in the speculations, were compelled to join in the *general laugh* at them, and to shelter themselves under the ground of an *epidemic illusion.*

Yet in the short space of seven years, we have not only seen the merino race rise into favour, but we have seen sheep of that breed introduced from the cold and comfortless region of Saxony, and selling at prices which, it is alleged, have afforded the importers a profit of 12 or $15,000 on a very few sheep. We ought not, however, to disguise or conceal the fact, that much of this extravagant demand has been the result of a system of *protecting* duties, which, whatever the effect of the eloquence of interested raisers of sheep may produce on public opinion and policy, is radically unsound.

Fifty years hence men will be, if not *astonished,* at least ashamed, that the science of political economy was so little understood in our country. They will be surprised that we should be willing to pay so much for articles of the first necessity, merely to advance and increase the profits of one-thousandth part of our community—that we should consent to pay for our clothing 35 per cent more than we ought to pay, or than it is worth, the whole of which constitutes the profit of one-hundredth, or one-thousandth part of our population. But we are as yet in our infancy; and it is not extraordinary that we should adopt the erroneous doctrines prevalent in Europe *one hundred years since,* and in some parts of Europe even now. The concentration of effort and exertion of opulent, intelligent persons, interested in any particular branch of industry, must for a long period of time be an overmatch for the enlightened but disinterested advocates for an *entire freedom of trade,* and of *human industry.* It must not be inferred, that we think lightly of the value of manufacturing industry, nor of its effects on our prosperity; but we would have its growth a natural one, healthy and vigorous—which, not depending on monopolizing acts, will endure by its own native strength. It will not be supposed that I am unfriendly to manufactures, in which the fortunes of those most dear to me, and a large portion of my own are engaged; but I wish that they should repose on a basis much more secure and durable than *legislative* provisions, *subject to repeal,* and tending to an unnatural and morbid extension of them, much more ruinous to *small* adventurers, than to the larger ones.

We will now advert to another branch of the efforts of this Society *to improve the breed of domestic animals.* It is, we all know, debateable ground. We shall not enter into the controversy; but we owe it to ourselves to defend the grounds on which we offered premiums for *imported* stock.

It was well known to every agricultural man, who was a reader, that Great Britain and France were not contented with the existing state of their horned cattle; that for fifty years last past they had set themselves seriously at work to *improve* them. It was as certainly true, that in *our* country *no such effort had been made.* Of course, it was to be *presumed* that these nations *had improved their races;* while ours had been, to say the least, stationary. It is admitted on *all* sides, that much may be done by selection of fine individuals, and by care in preserving the important races pure from contamination or intercourse with poorer ones. No such selection of our races has taken place to this hour, that I know of. It cannot be denied, that we in New England have taken no pains whatever on this subject. If it should be admitted, that the fine natural pastures on the beautiful, fertile and moist hills of Worcester, that paradise of New England for fine cattle, had kept up a race of cattle, vigorous, and nearly perfect in their forms, the same could not be affirmed of Bristol, or the southern counties, or of the northern part of Middlesex or Norfolk. In truth, our race of *milch cows* was and *is generally* ordinary, and our *cattle at large* may be affirmed to be inferior to those of England, of the Netherlands, and of Normandy. I can only say, that going to Europe, with very little agricultural knowledge I admit, in 1803, the first and deepest impression, made on my mind of any differences in the agricultural state of those countries compared with our own, arose from the marked, the unquestionable superiority of their *horned* animals. Their proportions were better; their size was generally superior; the bags of their cows were larger and better formed; the show at Smithfield, a market like that of Brighton, exhibited finer animals for sale—much finer, on common market days, than Brighton, except rarely, *ever* exhibits. I speak of the *average* appearance, which is the only *fair* rule.

On my return I was struck with the difference; the inferior state of our cattle; the comparative amount of offal when the animal was *fat.*

I should limit myself, as the first and principal advantage derived from foreign importation to this, that the care bestowed on the cross breed is of itself a boon, equal to *all* the increased expense. We have been, we all know, utterly careless of our young stock. The introduction of a *new* breed produces of itself a greater degree of care. This is a good not easily estimated. The attention to *one* animal naturally leads to an increased attention to a promising one of *native* race; and so the whole mass are gradually improved. Is not this the way, the ordinary course, by which all other improvements in human industry are produced?

If Mr. Slater had not introduced his cotton mill into Rhoce Island some 30 years since, can any man say that there would have been at *this* day a cotton factory in New England? I do not mean to say that there might not; but I have no doubt that this establishment accelerated the introduction of them. The knowledge, that other nations possess superior modes of industry, does not excite, or but *very slowly excites,* a disposition to copy the example. One successful effort at home, does more in eight years, than fifty years success in another country. We are, it is true, imitative animals, but still we need to have the example before *our own eyes.* We apply these remarks, which we believe to be sound, to agricultural improvements, and especially to the amelioration of our domestic animals. How long had we read of Saxony and Spanish sheep without ever *dreaming* of introducing them? Once introduced, they spread with a velocity which is immeasurable. Grant, that the horned cattle imported are not in any respect superior to our own—(not that I believe it,) yet their introduction has given a value to all other stock of the same description, by inducing more care as to their treatment and improvement, and a general attention to the *subject.* If it *has not* produced this effect, it must be only because we are incorrigibly obstinate in persisting in *old* usages, in the neglect of selecting the finest individuals for breeding, and of sustaining and improving by generous food, those *which we do raise.*

It surely cannot be unimportant in a state, whose great staples must forever be, their beef, pork, and wool, to urge on *every* occasion, to press by *every* means, the amelioration of the races of the animals which yield us these staple productions. We may indeed fairly differ as to the *means best adapted* to the *end;* but as this must be a subject of some delicacy and difficulty, it would appear to us to be the wisest and best course to give a free and unrestrained range to every sort of experiment, not the least important of which, in my judgment, nay, the *most important,* is to see, by actual trial, how far the European improvements in the breed of cattle, our staple productions, are adapted to our culture.

If they *fail,* no lasting injury can be the consequence, because the opponents of imported stock contend, that the progress of change *is very slow,* and if *disadvantageous,* will of course be checked by individual interest, before any great evil should be effected. My own conviction is, that the experiment has been so far successful.

Having made these general remarks, which I am sensible have been extended to what, I fear, will be felt to be a tedious length, let us now advert to our present cattle show, and to those animals which fell under the particular and minute notice of the committee of which I was chairman.

Such an exhibition of fat cattle has, so far as I know, never been seen at Brighton, and I believe in America. There were no less than thirteen animals, weighing from 1673 to 2313 pounds, and from 5 to 7 years of age. In every case but one, they had been inured to hard labour; and in every case the *expense* of feed in fatting was *far less* than English writers give as the average course of fatting in England. *Operate as it may,* it is both *my duty and inclination,* to state fairly and fully the results and the facts. The greater part of these animals had been taken off from labour about seven months. Their food had been generally what is called cob-meal, that is, the corn and cob of Indian corn ground together. Some interesting facts were stated by *one* farmer, which I deem it a duty to exhibit.

He tried his ox with pure Indian meal, and after a few days trial, the animal refused it. He then tried the coarser food of cob-meal, which I have just defined, and he took it greedily. This is a modern experiment and may prove of great practical utility. A Shrewsbury farmer, I think by the name of Rice, was the first who communicated it to *our* society, though it may have been in use *long before.* It is important, however, to know, that an animal may refuse a richer food and prefer a coarser one. I am not at all surprised at it. It is precisely in conformity with what we see every day around us. A sailor would pine on turkies and dunghill fowls as a constant food, and return with pleasure to his beef and pork, and peas soup.

There was another very interesting fact disclosed on this examination. There were three fine *five years* old steers of Joseph Easterbrooks, Esq. of Royalston, two of which had been worked hard from the age of three years, and the third had *never had a yoke around his neck.* The judges (and better judges there could scarcely be than my associates,) could perceive no sensible difference in the value of the worked and unworked cattle. Of the *same* age, owned by the *same* man, with the *same* treatment and *food,* the unworked oxen often were in no degree superior to those which had been submitted to labour. Great Britain might learn a lesson from *this* example, if her farmers could have been present. It is also worthy of remark, that these five years old cattle weighed about a ton a piece, and the *seven* years old cattle but a *trifle more.* I state these facts as being worthy of notice, since I deem one practical remark of far greater value than volumes of theory.

The Committee award the first premium for fat oxen to Joseph Easterbrooks, of Royalston, for his dark brown ox—weight 2104, 7 years old—$25.

The second premium for fat oxen, they award to John Temple, for his silver nosed ox, 6 years old—weight 2178—$20.

The third premium to the same person, John Temple for his other ox of the same yoke—$10.

I owe it to my colleagues, to whom I wholly deferred the decision in this case of fat cattle, to say, that their duty was one of peculiar difficulty and delicacy: The cattle were all so fine, so equal in their forms, proportions and good qualities, that even such judges as Mr. Winchester and Mr. Baker, my associates, must have been, and they were embarrassed.

On this subject, I will take occasion to say, that our cattle are in fact heavier and larger, in *my* opinion, than the English cattle, taking them *on an average in both cases.*

The great distinction which I should make from the experience of six years, at our cattle shows, would be this—that the *crosses* of the *imported* stock have *less* offal, *less unprofitable meat,* keep fat with *less food,* or rather keep *more* fat on the *same food,* than our own races.

I know very well that this opinion is questioned by very high authority; but my opportunities have not been few, serving for so many years on this committee; and I am constrained to say, and it is *my duty* to say it, as I *believe it,* that upon precisely the same food the improved races of Great Britain (as we see them *here,*) not only have more profitable flesh. on parts of great value, but they will thrive faster on the same food than our native stock. Exceptions, of course, every man of sense knows, occur in all breeds. I know personally, that an animal, taken from its mother at a *week old,* treated *precisely as native stock* by its side was treated, has been *always fat,* while the others were lean. I touch not the question, for it is *but conjecture* whether, with our inferior and often careless treatment, they will not *degenerate.* *If* they *do,* and only *when* they do, we ought to consider them *no longer objects of attention.*

The competition for bulls, we are sorry to say, was this year smaller than we have ever known. We award—

The first premium to Zephaniah Brown, of Charlton, for a bull out of Holderness, an imported animal—$30.

The second to William Gilmore, of Franklin, Norfolk county, for his bull, also out of Holderness—$20.

The third to hon. John Welles, for his bull of the Cœlebs race—$10.

The bull calves were also few in number; much less than usual, and we regret it.

The first premium we award to the hon. Mr. Welles for a bull calf from Admiral, 4 Denton—15 dollars.

The second to Jeremiah Hawes, of East Sudbury, for a bull calf of *native breed*—$10.

The third to Henry Craft, for a bull out of Mr. George Lyman's beautiful imported bull—$5.

EASTON CATTLE SHOW.

The hour of distributing Premiums at this Exhibition was too late for our paper of to-day. We can only give a general view of it, without a satisfactory detail of particulars, which will appear next week.

The show of Cattle was good, but not so numerous as before, though the specimens were very fine. The Devons were (we believe,) universally admitted to be superior to any thing ever exhibited on this ground. The Sheep were numerous and of the finest quality—no finer sheep could be offered to view. The Swine were not numerous, but all of fine form and size. The display of Horses was considered by the by-standers, to be the most inferior one ever made here. There were some fine Mules, and a few good looking Jacks; some fine yokes of Oxen. The exhibition of Butter was beautiful, and we learn that the quality of so many parcels was so fine as to puzzle the judges very much. The specimens of household manufactures were, as usual, most beautiful, numerous and well wrought. We cannot, however, touch that subject further, without injustice, and therefore leave it to the report that the committee of judges will make on it, who will be much more capable than we are.

Upon the whole, the show was highly creditable, though less extensive in some parts of it than formerly. The company was numerous and highly respectable in character, though we regret to say, not so numerous as four years ago, when the novelty was greater.

We hope our citizens will not suffer this useful and important institution to decline, either for the want of patronage or the want of their attendance and encouragement. The longer we keep up cattle shows, the better able we shall be to keep them up, and the better prepared we shall be to give interest and utility to them. One grand annual exhibition of this sort for our shore, where all the exertions of all the intelligence and enterprise of all the counties could be brought together, in generous competition, would do. The extent of country is about enough to be drawn together annually to one point, for a general exhibition of individual exertions; it would afford an ample field for competition, without which competition, warmly contested and spiritedly kept up, there can be no hope of preserving cattle shows. As for individual county shows in our present stages of incipient improvement, they are out of the question: we may amuse ourselves by the effort, if we please, but the effort must prove unavailing; the limits of competition are too narrow; and what value or reputation can premiums, conferred alone in the exertions of one county, give to articles that obtain them upon such a restricted scale? If the object is improvement, throw open the doors to all—let the chances of rivalship be as great as possible—make the competition general—call together the greater number, and the more you increase the theatre of exertion, the more you promote the general interest. [*Easton Gazette.*

ON RAISING HORSES.

Montgomery County, Md., Nov. 5, 1825.

To the Editor:

I have long, and with increasing wonder, observed the practice pursued by (perhaps,) a majority of the people in our state, of rearing colts sired by studs, many of which are, in reality, fit for no single purpose that the foal is designed for—as though they sincerely believed there was a reasonable probability of thus obtaining a good horse. And notwithstanding it is, I believe, in most counties in the state, proven to a demonstration, that the general practice in this respect, is most destructive to the interests of those who pursue it; yet, in despite of all conviction, and that kind of conviction too which they are obliged to admit whether they will or not, still—good "easy going souls"—when a peddling horse comes round in the spring, if he is fat and shines a little, the mares are put, even if in many instances the horse has not sufficient activity to walk when led, without stumbling.

Now, what do we hear urged in favour of all this—but that "he stands cheap"—"it is too far to go to such a horse," (naming him,) or that "my mare is not a first rate, and is not worth putting to a fine horse." Well! let us examine these "knock 'em down" arguments. And first, the cheapness—perhaps as low as three dollars; and for this a colt is the product. Now let us pay ten dollars to a good horse; put the colts in the market at four years old; and ten to one but the colt for the siring of which ten dollars was paid, will command eighty to one hundred and fifty dollars, when perhaps it will be difficult to obtain forty for the other. Then the cost and trouble of going 10 or 20 miles to a good horse, will not amount to more than attending a few vendues, which we think costs but little. "But here there is a prospect of gain." Just so in the other case.

If a mare is not worth putting to a fine horse—why, in the name of common sense, put her to a horse at all? for if from a good one she will not be likely to bring a colt that will pay for raising and the price of siring besides, what kind of a monster is to be expected from the other? Something might be said in relation to the probability of getting a colt from a horse that has but a stand or two, or perhaps is only kept at home. When from one, going all over a county in pursuit of custom, the chance is but slim.

An Admirer of good Horses.

[The writer's object is clearly expressed, in plain language, best suited to the subject—and it is surely an object of very great importance, when we consider the capital employed, the care bestowed, and the expense in rearing horses. The observations of the writer are of general application; but let us apply them to a single state—to Maryland, for example. Let every reader ask himself how many horses are reared annually in the state of Maryland, and then reflect what would be the clear aggregate gain to the agricultural community of the state, if to each of these horses, were added an addition of *fifty dollars in its value?*

There are nineteen counties in the state. Suppose these counties to average only one hundred colts per annum; we are perfectly confident that if these were sired by thorough bred horses of good size and figure, these 1900 horses would average $50 more in the amount they would sell for, over and above the difference in the cost of the horse's services—and thus the state would realize a clear *annual* increase to its capital of $95,000! True it is, that one farmer will say, I should gain nothing; another, that I should not be benefited—but it is undeniable, that the community, the agricultural community of the state, in the aggregate, would gain the $95,000—which are now lost, for want, as it would seem, of plain common sense reflection and management! Now, how can any class of people expect to escape the charge of ignorance; how can they expect to be honoured and respected; how can they expect their sons, if discerning and well educated, to choose, spontaneously, a calling *followed* by those who thus expose themselve to the reproach of improvidence and want of common discernment in the cardinal points of their pursuit? As in reasoning there is nothing like apposite *examples,* let us state one or two. Some few years past the Editor of this paper procured the best jacks, and two fine thorough bred horses, for the use of the farmers of the state—one of these was the celebrated horse Tuckahoe. They did not make enough to pay expenses. Farmers, and wealthy farmers too, said it is too much to give; I can send my mare to a horse for $5. Well, what was the result? The few who sent mares to Tuckahoe have fine valuable colts—we passed one on the road yesterday, by a good common mare, the colt not quite two years old, for which the owner might get in any market $150—while the same mare would have given a colt by a $5 horse that would not sell for $60. Again! When an association was lately formed in this city, not four years since, to improve the breed of horses, by encouraging the exercises of the turf, it was treated by some as visionary. What has been the effect? In two cases that have fallen under our observation, gentlemen in Cecil county, sent fine blooded mares to Tuckahoe and Eclipse—from the two mares they have two colts by each horse, for which they have refused $2000!! For the services of Eclipse, these gentlemen were, as their wise neighbours observed, foolish enough to pay $50. It is probable, that if brought to this state, he would not get as many mares at $30, as would pay the groom; whilst some great beast, with bull neck, shoulder as straight as a plumb line, and legs like bed posts, if he only covered at $5, would get perhaps 80 mares. In one case, the colt would be worth about $40—in the other, from $150 to 200; yet the very men who maintain this ridiculous and wasteful management of an important branch of their farming operations, are eternally thinking and calculating, and talking of money! money! money! and if you impeach their wisdom, they call you a visionary, a theorist, a "*book farmer*"! It is probable that the Jerseymen, in the blood of the "*Messenger*" horses, have levied on other states an annual contribution of some $50,000.]

THOROUGH BRED HORSES.

Dear Sir,

The late match race at New York having just terminated in favour of the South, no doubt, at such a moment, the admirers of that noble animal, the horse, dilate on the respective merits of those who may have been brought forward as candidates for distinction; and who, like the Horatii and Curiatii of antiquity, were permitted to step forth and decide the speed (if not the strength,) of the rival parties. At such a moment, I have thought it would not be mal-apropos to communicate a fact which may be wholly relied upon—which shows the spirit of our brethren of New York, who do nothing by halves, and every thing worthy of imitation—and who evince spirit, talent and liberality in every project (from the cutting of a canal to the racing of a horse,) to which they affix their hands or turn their attention. The fact that I allude to is this: Col. Sewell and Samuel Hollingsworth, Esq., of Elkton, are each the proprietors of an Eclipse and Tuckahoe horse colt—for these four colts they have been offered $2000, by a company of gentlemen of New York. As an evidence that the spirit of enterprise, with respect to this noble animal, is not confined to the North, it is with pleasure that we add, that the offer was not accepted.

Is not this incident sufficient to induce *breeders* to be more select in the animals that they breed from? It costs no more to sustain one of acknowledged worth, than one confessedly indifferent; and it appears strange that we should persevere in rearing, at the same cost, a colt that at maturity will not readily command $60, when, by the same expense and trouble, we might have at our disposal one that would readily produce thrice the sum.

Quere—Which is the most profitable, raising calves or colts? The former, in our community, generally sell when 15 months old at $10, or thereabouts—or blood horses, when at the same age they command $500? It will require but little pen, ink and paper, and less calculation, to answer the question.

Rus. in Urbe,

J. S. Skinner, Esq. *Nov.* 8, 1825.

LADIES' DEPARTMENT.

GENERAL OPERATIONS OF COOKERY.

Few of the substances which we use for food are consumed in the state in which they are originally produced by nature. With the exception of some fruits and salads, all of them undergo some preparation. In most cases, indeed, this is indispensable; for, otherwise, they would not only be less wholesome and nutritive, but less digestible. The preceding observations, therefore, are only applicable to the materials when cooked, and not to the crude vegetables and raw flesh in the undressed state.

The general processes of cookery resolve themselves into the various modes of applying heat under different circumstances. They are the following—roasting, frying, broiling, baking, stewing, and boiling. These operations not only soften the raw materials, and render them alimentary, but the chemical constitution of the cooked substance suffers also such alterations, that its constituent parts can often no longer be recognized.

ROASTING ON A SPIT

Appears to be the most ancient process of rendering animal food eatable by means of the action of heat.

Spits were used very anciently in all parts of the world, and perhaps, before the plain practice of hanging the meat to a string before the fire. Ere the iron age had taught men the use of metals, these roasting instruments were made of wood; and as we find it in Virgil,* slender branches of the hazel tree were particularly chosen—

——"Stabit sacer hircus ad aram
"Pinguiaque in verubus torrebimus extra colurnis."
"The altar let the guilty goat approach,
And roast his fat limbs on the hazel broach."

Roasting is the most simple and direct application of heat in the preparation of food. The process is, for the most part, confined to animal substances, though several fruits, such as apples, chestnuts, and some roots, are in this manner directly subjected to fire.

But in dressing animal food, butcher's meat, venison, fowl and fish, roasting is one of the most usual processes, and it is, we believe, the best for rendering food nutritive and wholesome. The chemical changes also which roasting induces, are sufficiently slight, as a careful analysis will procure from meat, properly roasted, nearly all the elements which are to be found in it in the raw state. Slight as the change is however in a chemical, it is considerable in a culinary point of view. The texture of the meat is more relaxed and consequently it is more tender; it is also more sapid and high flavoured. It is absolutely essential that the meat intended for roasting, has been kept long enough for the fibres to become flaccid, without which precaution the best meat does not become tender. If the meat be frozen, it should be thawed, by putting it into cold water, before it is put on the spit.

The process of roasting requires some care to conduct it properly. The meat should be gradually turned before the fire, in order to effect its uniform exposure to the rays of heat. A covering of paper prevents the fat from taking fire, and frequently *basting* the meat with gravy or melted fat, prevents it from being scorched or becoming dry, bitter, and unpalatable. It is necessary to be very careful in placing the meat to be roasted at a proper distance from the fire. If it is put too near, the surface will be scorched and burnt to a cinder, while the inner portion will be quite raw; and, if it be too distant, it will never have either the tenderness or the flavour it would have had by proper care. At first, it should be placed at some distance, and afterwards be gradually brought nearer the fire, to give the heat time to penetrate the whole piece equally; and, the larger the joint is, the more gradually should this be done. Poultry, in particular, should be heated very gradually.

When the joint is of an unequal thickness, the spit must be placed slanting, so that the thinnest part is further removed from the fire.

The less the spit is made to pass through the prime part of the meat, the better. Thus, in a shoulder of mutton, the spit is made to enter close to the shank-bone, and passed along the blade-bone of the joint.

When the meat is nearly sufficiently roasted, it is dusted over with a coating of flour; this, uniting with the fat and other juices exuded on the surface, covers the joint with a brown crust, glazed and frothy, which gives to the eye a prelude of the palatable substance it encrusts.

The process, as just described, is very similar, whatever may be the sort of meat roasted, whether joints, and the several species of fowl or game. Fish is not usually dressed in this way, though the larger sorts are sometimes roasted. Those who relish eels and pike prefer them roasted to any other mode of dressing them.

It is a general practice to move the spit back when the meat is half done, to clear the bottom part of the grate, and to give the fire a good stirring, that it may burn bright during the remainder of the prócess. The meat is deemed sufficiently roasted when the steam puffs out of the joint in jets towards the fire.

To facilitate the process of roasting, a metal screen, consisting of a shallow concave reflector, is placed behind the meat, in order to reflect the rays of heat of the fire back again upon the meat. This greatly hastens the process. The screen is usually made of wood lined with tin. It should be kept bright, otherwise it will not reflect the rays of heat.

ROASTING ON A STRING

Is usually performed by means of the useful contrivance called a *bottle jack*, a well-known machine, so named from its form. It only serves for small joints, but does that better than the spit. It is cheap and simple, and the turning motion is produced by the twisting and untwisting of a string. The sort of roasting machine, called the *Poor Man s Spit*, is something of the same nature, but still more simple. The meat is suspended by a skein of worsted, a twirling motion being given to the meat, the thread is twisted, and when the force is spent, the string untwists itself two or three times alternately, till the action being discontinued, the meat must again get a twirl round. When the meat is half done, the lower extremity of the joint is turned uppermost, and affixed to the string, so that the gravy flows over the joint the reverse way it did before.

ROASTING IN AN OPEN OVEN.

A Dutch or open oven is a machine for roasting small joints, such as fowls, &c. It consists of an arched box of tin open on one side, which side is placed against the fire. The joint being either suspended in the machine on a spit, or by a hook, or put on a low trevet placed on the bottom of the oven, which is moveable. The inside of the oven should be kept bright that it may reflect the heat of the fire. This is the most economical and most expeditious method of roasting in the small way.

ROASTING IN A CLOSED OVEN.

Roasting in a closed oven, or *baking*, consists in exposing substances to be roasted to the action of heat in a confined space, or closed oven, which does not permit the free access of air, to cause the vapour arising from the roasted substance to escape as fast as it is formed, and this circumstance materially alters the flavour of roasted animal substances.

Roasters and ovens of the common construction are apt to give the meat a disagreeable flavour, arising from the empyreumatic oil, which is formed by the decomposition of the fat, exposed to the bottom of the oven. This inconvenience has been completely remedied in two ways, by providing against the evil of allowing the fat to burn; and secondly, by carrying out of the oven by a strong current of heated air, the empyreumatic vapours, as fast as they are formed.

Such are the different processes of roasting meat.

Rationale.—The first effect of the fire is to rarefy the watery juices within its influence which make their escape in the form of steam. The albuminous portion then coagulates in the same manner as the white of an egg does, the gelatine and the osmazone* become detached from the fibrine, and unite with a portion of the fat, which also is liquefied by the expansive property of heat. The union of these form a compound fluid not to be found in the meat previously. This is retained in the interstices of the fibres where it is formed by the brown frothy crust, but flows abundantly from every pore when a cut is made into the meat with a knife. In consequence of the dissipation of the watery juices, the fibrous portion becomes gradually corrugated, and, if not attentively watched, its texture is destroyed, and it becomes rigid. Chemists prove that the peculiar odour and taste of roasted meat depends on the development of the principle which has been called *osmazome,* or the *animal extractive matter* of the old chemists, a substance which differs very much from every other constituent part of animal matter *chemically,* in being soluble in alcohol—and to the *senses,* in being extremely savoury or sapid. It is upon this principle, which seems to admit of considerable varieties, that the peculiar grateful flavour of animal food, (whether in the form of broth or roasted,) and of each of its kinds, depends. Osmazome exists in the largest quantity in the fibrous organs, or combined with fibrine in the muscles, while the tendons and other gelatinous organs appear to be destitute of it. The flesh of game, and old animals, contains it in greater quantity than that of young animals abounding in gelatine.

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* Georgics ii. 545.

* Derived from *οσμη smell, ζωμος, broth.*

The tenderness produced by roasting, we account for, from the expansion of the watery juices into steam, loosening and dissevering the fibres one from another, in forcing a passage through the pores to make their escape by. This violence, also, must rupture all the finer net work of the cellular membranes, besides the smaller nerves and blood vessels which ramify so numerously through every hair's breadth of animal substance. This dissolution of all the minute parts of the meat, which must take place before a particle of steam can escape, will most clearly account both for the tenderness and the altered colour of roasted meat. The action of heat, also, upon the more solid parts of the bundles of fibres, will, independent of the expansion of the juices, cause them to enlarge their volume, and consequently make the smaller fibres less firmly adhesive.

[*Accum's Culinary Chemistry.*

SPORTING OLIO.

GOOD SHOOTING.

Wak field's Blue Ridge, Nov. 3, 1825.

> "Nor on the surges of the boundless air,
> Though borne triumphant, are they safe; the gun,
> Glanc'd just, and sudden, from the fowler's eye
> O'ertakes their sounding pinions; and again,
> Immediate, brings them from the towering wing,
> Dead to the ground."—
>
> [*Thomson's Autumn.*

Dear Sir,

Some time since you requested accounts of successful sporting—here then you shall have account of shots which will match the best you have published. On the 20th of the last month, James Roberts, John Wingfield, and myself, tempted by the brilliancy of the heavens and the buoyancy of the air, agreed to an evening's shooting. We accordingly, after dinner at 1 o'clock, proceeded to an old field which was now to receive its first "beat" for this season. Our dogs were two of the "best Spanish blooded pointers." The report of the shooting is, that Mr. Wingfield, (who by the way is one of the best of shots,) discharged, to use the sporting phrase, 19 wads, and bagged 16 bills; Mr. Roberts discharged 18 wads and bagged 14 bills; making in toto, 37 wads discharged and 30 bills obtained—which is, as I think, pretty good shooting for these parts. As to myself, who am an unlucky and dyspeptic knight of the yardstick—not being used to such acumen of sight and steadiness of nerve, I was kept all the time in amaze to see how suddenly they would cut summersetts, even

"Though borne triumphant on the surges of the boundless air."

Insomuch that I shot none at all, for which I am in duty bound to pay forfeit by making report of the "days' beat."

Yours, as usual,

Test. Raoul. J. THOMPSON.

P. S. I forgot to mention that in returning homewards, an "unlucky, and as it *eventuated,* an unfortunate yellow hammer" obtruded himself--which by the powers of *Diana* I made out—to bag.

FORM OF A SPORTSMAN'S JOURNAL.

Where killed.	When.	Black Game.	Grouse.	Partridge.	Pheasant.	Woodcock.	Snipe.	Ducks, or Wild Fowl.	Hare.	Rabbit.	Total each Day.	Shots missed.	Remarks on each Day.
	Monday, . . .												
	Tuesday, . .												
	Wednesday,												
	Thursday, .												
	Friday, . . .												
	Saturday, . .												
	Total each week												

GENERAL OBSERVATIONS.

SHOTS IN AN OUNCE.

Of B. B.	One ounce contains	59	pellets.
B.	Do.	67	-
No. 1	Do.	85	-
2	Do.	112	-
3	Do.	135	-
4	Do.	187	-
5	Do.	228	-
6	Do.	261	-
7	Do.	304	-
8	Do.	640	-
9	Do.	930	-

THE BALTIMORE HUNT.

[We are gratified to learn that an attempt is making to form a club, for keeping a large pack of the best hounds for hunting during the approaching seasons. Looking to the means and the liberal spirit of the gentlemen who have taken it in hand, we cannot doubt of its success; and of all exercises, none can be esteemed more manly and healthful. The following remarks of a celebrated writer a century ago, on the pleasures and advantages of the chase, are no less applicable to the present day.]

[From the Annals of Sporting.]

PLEASURES AND ADVANTAGES OF HUNTING.

It must be admitted by all that there is something extremely fascinating in the sports of the field, since they are not only universally held in the highest estimation, but have uniformly constituted the most noble pastime of man, from the earliest periods to the present time. According to a celebrated writer, whose ideas on the subject appeared before the public about a century ago, the following are amongst the advantages to be derived from the pleasures of the chase:—

"Hunting trains up youth to the use of manly exercises in their riper age, being encouraged thereto by the pleasure they take in hunting the stately stag, the generous buck, the wild boar, the cunning otter, the crafty fox, and the fearful hare. Exercise herein preserveth health, and increaseth the strength and activity. It neither remits the mind to sloth nor softness, nor hardens it to inhumanity; but rather inclines men to good acquaintance and generous society. It is no small advantage to be inured to bear hunger, thirst, and weariness from one's childhood; to take up a timely habit of quitting one's bed early, and learning to sit well and safe upon a horse. What innocent and natural delights are they, when he sees the day breaking forth these blushes and roses, which poets and writers of romances only paint, but the huntsman truly courts! When he heareth the chirping of small birds, perching upon their dewy boughs! When he draws in the fragrance and coolness of the air! How jolly is his spirit, when he suffers it to be transported with the noise of buglehorns and the baying of hounds, which leap up and play round about him! Nothing doth more recreate the mind, strengthen the limbs, whet the stomach, and cheer up the spirit when it is heavy, dull, and overcast with gloomy cares: from whence it comes that these delights have merited to be in esteem in all ages, and even amongst barbarous nations, by lords, princes and highest potentates."

This golden opinion of hunting, like many other wise sayings and doings of the old school to which we pay too little respect now-a-days, cannot be too strongly impressed upon the minds of the rising generation; if they wish to emulate the bodily vigour, or fine manly character of their forefathers; a character which will never be obtained by travelling over France or Italy, and by an indulgence in the enervating luxuries of those lovely and attractive, but more prostrating regions. Gay's monkey, who had seen the world, is but too faithful a portrait of many of our young sprigs of fashion, who go to Venice and the Brent—stay three weeks at Rome—stare about them—and come home content!

Thus the dull lad, too tall for school,
With travel finishes—a fool.

PEDESTRIANISM.

Daniel Angell, called the Norfolk pedestrian, started at 2 o'clock in the morning to go 72 miles in 12 successive hours, on a piece of gravel road leading from the Horse and Gate towards Horseway, half a measured mile and turns. The morning being remarkably fine, and the road excellent, he started in high spirits and full of confidence. He ran the first seven miles in 57 minutes, 14 miles in 1 hour and 54 minutes, 21 miles in 2 hours and 55 minutes, 27 miles in 3 hours and 50 minutes, 50 miles in 7 hours and 40 minutes, including stoppages, and finally completed the almost unprecedented task of 72 miles in 11 hours and 55 minutes, having 5 minutes to spare. The concourse of people assembled upon the occasion, to witness this great performance, from the neighbouring towns and villages, was immense, but little blunt was sported. After he had completed half the distance, 5 and 6 to 4 were offered on time against him, but no takers.

TROTTING MATCH.

This match with Traveller, decidedly the fastest trotter of the day, in and out of harness, took place in Ashley-park, near Hugden, the seat of Colonel Staples, on Saturday, January 29, for one thousand sovereigns, [$4444.] It was to perform thirty-six miles in three hours, and a carriage of the lightest description was made for this match. The driver was George Skeen, a jockey of thirteen stone, and betting was 5 to 4 on the horse, which had before done twenty-eight miles in two hours, on the Saturday after the late Chelmsford races. The ground over which the horse trotted this time was a prepared circle of four miles, and we subjoin the time each four miles was performed in, to show the steady pacing of the horse.

	Min.	*Sec.*
First four miles	19	40
Second do.	19	41
Third do.	19	39
Fourth do.	19	42
Fifth do.	19	40
Sixth do.	19	50
Seventh do.	22	10
Eighth do.	19	40
Ninth do.	19	41

Total—*2h. 59m. 43s.*

The bit was drawn once only in the twenty-fifth mile, and it will be seen that there was not more than three seconds difference in any of the four miles, except in two instances, in one of which the bit was drawn, and in the other there was a break.

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 11, 1825.

Extract of a letter from Havre, Oct. 1, 1825.

"Our sales of Cotton since the 15th, comprise 5187 bales of American, viz: 1968 Uplands at 23¼ to 30½ sous; 1309 Alabamas, &c. 27 to 30½; 1865 Louisianas 30 to 37; and 45 Sea-islands. We remark no material decline in prices, but holders appear decidedly more anxious to effect sales, since it has been ascertained that about 3000 bales are on the way from Liverpool. This will have the worst effect. Although our stock is much reduced, our prices are now sufficiently above those of our neighbours to admit of their sending us supplies.

"Ashes and Rice are nominally the same as per last. Coffee declining—St. Domingo is held at 14½, but no buyers to be found over 14 sous. Other articles without any change. At Bourdeaux, Sept. 24, Brandy, 4th proof, was at 245 f."

☞The Trustees of the Maryland Agricultural Society will meet *not*, at Lexington, as stated in the last Farmer, but at Bloomsbury, the residence of H. V. Somerville, Esq.; and on *Saturday next*, the 12th inst. *at ten o'clock A. M.* Mr. Somerville particularly desires that the meeting be punctual, and at an early hour.

☞The premium offered by the Agricultural Society of the Shenandoah Valley of Virginia, for the *best conducted farm*, was awarded to H. S. Turner, Esq. of Jefferson county. Rich land is a very good thing, but talents and discernment only, can make the most of it. They *tell* in agriculture as well as in other affairs.

ATLANTIC SOUVENIR.

The *Atlantic Souvenir*, for 1826, which will shortly be published by Messrs. Carey & Lea, is a beautiful little volume, in its typographical dress, and in the engravings with which it abounds. It contains twenty-four original tales or pieces, poetical and prose, productions of "our own citizens," of such authors as Paulding, Barker, Sedgwick, Bryant and Waln. It is intended as a "Christmas and New Year's Offering," and will afford an agreeable literary treat to all who may read it. The spirit and taste which dedicated the enterprize, the elegance of its execution, and the patriotic feeling which sought and obtained contributions exclusively from native authors, entitle the intelligent and respectable publishers to the most liberal and ample patronage, which we are sure they will realize.

☞We are requested to state, that Mr. Powel's "famous stock," is not entitled to distinction, through Mr. Isaac Clement's cattle, advertised in the American Farmer. The full blooded Holstein bull, was bred at the Hospital in Philadelphia, from Mr. Sim's Pennsylvania stock, it is believed.

☞We understand that Mr. Powel could have had $700 for one of his Bulls exhibited at the late Pennsylvania Cattle Show. Bishop, a bull which he sold last spring, at less than he had cost him, is stated to have had nearly 100 cows at 5 dollars each.

MARKETING.—Butter, per lb. 25 cts.—Chickens, per doz. $1.37½ to 1.50—Geese, 37½ to 50—Turkies, 62½ to $1—Ducks, per pair, 50 cts.—Eggs, doz. 18¾ cts.—Beef, prime pieces, lb. 8 cts.—Veal, 10 cts.—Lamb, 5 to 6 cts.—Pork, clb. $5—Irish Potatoes, per bush. 75 cts. to $1—Sweet Potatoes, 75 cts.—Turnips, 50 cts.

WHEAT.—Our quotations are for Eastern Shore grain—Wagon, or Western wheat, will command 5 cents per bushel more than our present prices.

TOBACCO.—Amount of inspections in the state warehouses, during the last week—131 hhds.

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Report of the Annual Exhibition of the Pennsylvania Agricultural Society—Brighton Cattle Show, Mr. Lowell's Report on Fat Cattle, Bulls and Bull Calves, with some prefatory remarks, No. 1—Cattle Show at Easton, Md.—On Raising Horses, with Remarks by the Editor—On Thorough-bred Horses—General operations of Cookery, Roasting on a Spit, Roasting on a String, Roasting in an Open Oven, and Roasting in a Closed Oven—Account of good Shooting—Form of a Sportsman's Journal—Shots in an ounce—The Baltimore Hunt—Pleasures and Advantages of Hunting—Pedestrianism—Trotting Match—Editorial, Notices, &c.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 00	9 00		
BACON, and Hams, . .	lb.	7	10	11	
BEES-WAX, Am. yellow	—	32	34		
COFFEE, W.I. Green, .	—	18½	20	22	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	20	23		
Georgia Upland, . . .	—	16			
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33	34	37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	3 50	
Shad, trimmed,	—	6			
FLAXSEED, Rough, . .	bush	1	1 12		
FLOUR, Superfine, city,	bbl.	5 00	5 50	6 00	6 75
Extra . . . . do.	—	5 25			
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	4 50	4 75	none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	53	57		
Wheat, Family Flour,	—	1 05	1 15		
do. Lawler, ...	—	85	95		
do. Red, ...	—	85	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	55	60		
Barley, ...	—	80			
Clover Seed, Red . .	—	5 00		6 00	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	32	35		
Peas, Black Eyed, . .	—	1 00		1 50	
Beans, White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	200			
HOPS, ...	lb.	28	30		
HOGS' LARD, ...	—	10	11	12	
LEATHER, Soal, best,	—	27	28		
MOLASSES, W. India,	gal.	37	40		50
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7	8	9	
NAVAL STORES, Tar,	bbl.	1 87½			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2	2 12		
OIL, Whale, common, .	gal.	30			
Linseed, ...	—	80	83		
PORK, Baltimore Mess,	bbl	14 50		15 50	
do. Prime, . . .	—	10 50	11 00	12 00	
PLASTER, cargo price,	ton.	5	5 37½		
RICE, fresh, ...	c.lb.	3 00	3 50	5	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	28½	29	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	34		50	
SUGARS, Havana White,	c.lb.	13 50		15 00	16 00
do. Brown, . .	—	11 00			
Louisiana, ...	—	10 00	11 00	11 50	12 50
Loaf, ...	lb.	19	22	20	22
Lump, ...	—	16	18	19	
SPICES, Cloves, ...	—	80	85	1 00	
Ginger, Ground, . . .	—	7		10	
Pepper, ...	—	18	18½	25	
SALT, St. Ubes, ...	bush	42	45		
Ground Alum, . . .	—	52		62	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 25		
Lisbon, ...	—	1 20	1 25	1 50	1 75
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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AGRICULTURE.

ON THE CULTURE OF HOPS

[The culture of hops for sale, is, we believe, confined to a small portion of the Union, and the knowledge of the process for raising, curing, and bringing them to market, very limited—yet this cannot be from any want of soil adapted to their growth in almost all the states. The places where they have appeared to us to flourish, with most luxuriance and vigor, are in the deep valleys between our high mountain ridges. We should suppose that at the present price of 30 cents per pound, they would well repay the labour of the husbandman. In previous volumes, we have given what were esteemed valuable directions, as they were derived from the best domestic sources, and we now present a treatise on the subject, translated from one of the excellent French journals received in exchange for the American Farmer.]

(*From the Bulletin des Sciences—Translated for the American Farmer.*)

On the Culture of Hops, by M. Fodere.

A remark of the author of this memoir informs us, that it has been made as much from his own researches, as from the work of a German author. Counsellor Ackerman, of Carlsruhe, from notes furnished him by Professor Nestler, and those who have cultivated it. This memoir having appeared to form a complete treatise on the culture of the hop, we have thought it our duty, for the benefit of such of our readers as attend to the cultivation of this plant, to follow the author in his developments on this subject.

M. Fodere, in the first place, observes, that the use of beer, or the aqueous solution of the fermenting principle in grain, is almost as ancient as that of wine; an assertion which he proves from the [illegible] barians, and from the writings of Homer and Herodotus, as regards the people of the south and east. He ascribes the invention of this drink to the Teutonic and Scandinavian nations; but it is probable, he adds, that beer was then made without hops. We are entirely ignorant as to the time when this vegetable was first made use of. However, the hop is much esteemed in those countries where beer is used; and on this account it forms an important branch of the prosperity of the countries beyond the Rhine.

The beer of Strasburg is held in great repute. The hops which are used there, are brought mostly from Germany; though, however, they are French hops, which are bought in France and sold again to the brewers of Strasburg, who, from a prejudice which is but too common, reject as French, the same which they afterwards buy as German hops.

To put an end to a state of things so contrary to the true interests of Alsace, the author has thought that the diffusion of the ideas on the culture of this plant would be very useful. The Agricultural Society of the grand duchy of Baden is encouraging this branch of industry and has published the result of its first experiments.

Bohemia and Spalta, in Franconia, are celebrated for producing the best hops; and this is attributed principally to the great care they bestow on them. Most lands are adapted to the culture of this plant, when well manured, light and moveable to the depth of 2 or 3 feet, and neither too dry nor too wet. A stiff argilaceous soil does not suit so well, because it is difficult for the roots to penetrate it; a very light, sandy soil, not affording sufficient nourishment, suits no better. Finally, with suitable care, such as manuring abundantly sandy soils; marling and liming stiff clayey soils; draining moist grounds, and watering the dry, &c. &c., there are but few kinds of soil that will not suit. But the exposition is an important consideration. A southern exposure is most favourable, where the rays of the sun may be admitted on all sides, and the hops defended from the north winds, which are very fatal to them in the spring, when the plants begin to shoot; situations near rivers, ponds, &c. should be avoided on account of the humidity, and those also near great roads on account of the dust. There are many situations at the foot of the chain of hills called Vosges, which would be perfectly suitable to the culture of this plant. The hop is cultivated as the vine, and they are propagated by roots the same way as asparagus. However, as in this plant the sexes are distinct, and the male flowers have no fruit, care should be taken in making a hop field, to leave only a sufficient quantity for bearing.

There is, properly speaking, but one kind of hop; but by cultivation there are five sorts, among which there is a great choice. The first is distinguished by stalks of a green colour, more deep than clear; the cones of it are white. This is regarded as the best; it ripens early, is much used in brewing and is in great demand by purchasers.

The cones of the second sort are white as the preceding, but smaller; it ripens eight or ten days sooner than the first, but produces less

The third sort, called garlic hop, has stalks of a crimson colour; its cones are long, four sided, and a little reddish at the end It ripens later than the former, yields a great deal of fruit, which contains less seed, but more flour; it does not form bunches, *or clusters*—its cones are supported by a long stalk. It is the best late hop, and much esteemed by brewers.

The fourth has stalks of clear red, and begins to bloom about the 24th of August; it yields but little fruit and ripens very late; it is often overtaken by the frost and completely spoiled.

The fifth has stalks of very deep red; the leaves are vigorous; it yields but little fruit, seed or flour; it is considered the worst. The late and early hop should both be cultivated in the same hop-field; but [illegible] well to separate them, by which means, if the season be favourable, there will be two crops; if unfavourable, you will be sure of one.

A hop field may be planted either in spring or autumn. If planted in autumn, it will give a small crop the first year; if planted in the spring, it will not produce till the second year. It is, however, best to plant it in the spring.

It should therefore be commenced in autumn by dividing the ground, forming the lines lengthwise; stakes should be placed at 5 feet distance to the end of the line; a second line drawn parallel at the distance of 5 feet; and the stakes laid down in the manner of a chess board.

At each stake make a hole 4 feet square and 3 feet deep; throw the earth from the surface on one side, and that from the bottom on the other side; leave it out all winter. In the month of February or of March, fill the holes two-thirds with the earth from the surface, (which was laid aside,) mixed with manure and good earth, and complete it a foot above the surface with good earth, (unmixed with manure,) so as to form a hill. This earth sinks down of itself, and if it is not enough so at the time of planting, it should be made so. *This* operation should be performed in April during fine weather, in the following manner:

Put a pole in the middle of each hill, and make trenches with the hand at the distance of a foot and a half from the pole, forming a triangle—plant at each angle one root; or, if they are not strong, two—plant them horizontally, cover them with good earth; press it a little, taking care not to injure the roots; then cover them again, forming a hill some inches high, in the middle of which leave a small *hollow or hole*, that the rain may sink to the roots.

In planting, take care that the roots do not touch the manure, (in any manner,) which would rot them. If it should rain immediately after they are planted, they will soon begin to shoot, if it does not rain, they should be watered in the evening, if there is no fear of frost.

To procure plants, uncover the old roots in the spring; choose the strongest of two years growth. They are fit to plant out when they are the thickness of a finger, five or six inches long, and a little fibrous, if they are firm and perfect, and if each plant has four or five shoots. When they have grown a foot and a half or two feet high, take away the poles which are in the middle and replace them by others of a middling size. They should then be worked, and the earth put round the pole in form of a hill. The lower leaves of the stalk should first be taken off, and the weeds which have grown around them pulled up. As the vines grow long, three of the most vigorous should be tied as slightly as possible to the pole, taking care to wind them round it from the left to the right; the rest should be cut as near to the root as can be done without injuring it, leaving however two, for about fifteen days, in case of accidents. They should never be tied too early in the morning, because having gained more sap during the night, they are more brittle in the cool of the morning than in the heat of the sun. Tying them too tight will prevent their growth. The second working, or *hoeing*, should be done towards the 24th of June; and the third about the end of July, taking care always to hill them, and to leave at the top a hollow to receive the rain. They should be always worked in dry weather.

As the stalks grow higher, they should be carefully tied to prevent their falling down. When they are young and low the leaves should not be taken off, because it is from them that they receive strength. As they grow a little higher, then the leaves should be taken off, particularly the large ones, which weaken the plant and prevent the circulation of air.

It is sometimes necessary, in a very dry season, to water [illegible] you work them, and take off the leaves, [illegible] the fruit ripen rather and increase the quantity. The hop field must be hoed with great care. The first year you may cultivate in it potatoes or any other vegetable, but a crop of any thing the second year would be very injurious. In order to defend them from the cold it will be proper at the commencement of winter, to put around each plant half a foot of manure, to dig it in well, and to hill it again. It will be necessary to renew the same operations every year, and prune the hop plants in the same manner as is done with the grape vine.

The poles are generally made of birch or alder: they should be cut at the large end at about 18 inches or two feet high, on three sides tapering to a point; and as the poles, which ought to be 18 or 20 feet high, form the principal expense in making a hop-field, the following precautions should be used to preserve them. Burn them at the end and rub them with tar; or it may be better after they are blunted and very dry, to put them in lime water and leave them in it for three days, then take them out and let them dry; rub them with sulphuric acid weakened by eight times its quantity of water, and then leave them to dry. This process hardens them, shelters them from rain and the attacks of vermin, and prevents them from decaying. They should be placed perpendicularly, and to make them more firm, two stakes should be affixed to each pole and tied together with a strong wire, or packthread well tarred. Notwithstanding this, a hop-field is sometimes thrown down by strong winds; they should therefore be tied together at the tops diagonally, with like strings; a precaution which will effectually protect the poles and the hop.

The hop requires immediate nourishment; therefore the manure should be well rotted—cow manure is best; neither that of horses nor hogs is fit for this culture, because the straw that is mixed with it is never sufficiently rotted. Even the cow manure which is taken from the stable is not fit; and those who intend making a hop-field in the spring, ought in autumn to put the manure in a heap, and cover it with earth; by this means it will be well rotted and reduced almost to mould. The author says mould, because this compost seems to suit the hop much better than manure, which contains small plants and insects, and is, as it were, less digestible for the radicles of the hop.

The author has thought proper to add in his memoir, the manner of making a kind of compost, indicated by a German author in a treatise on the culture of hops. Make a large deep hole not far from the dwelling-house, into which the waters from the stable and kitchen can flow. Collect the mud from ditches and the raspings of horn, the parings of cows' feet. the low grounds, the scrapings of streets, rotten wood, hair of tanned skins, ashes, all kinds of rags. saw-dust, turf, weeds, and in general all sorts of offal from animal and vegetable substances, and throw into the hole. Independent of the waters abovementioned, water the whole of this from time to time, with manure liquor, taking care to stir the mixture, then cover it again with planks to prevent evaporation. If, when you want to use it, it should be too wet, add as much good earth as will give it a body. If you have not animal substances, which sometimes happens in the country. put in the hole a bed of manure three feet high, and on that a bed of turf or sod eighteen inches thick, and successively a bed of manure and turf of the above thickness, to which may be added tan-bark or saw-dust, being careful to spread over it a little quicklime, reduced to ashes, which will make it rot quicker. Leave holes on the surface of the heap, and frequently pour manure liquor into them. By these two methods you will procure good mould; the first, however, is much more active.

It is not uncommon to see in a hop-field recently planted, in a rich and well manured soil, some of the strongest plants bearing the first year—this is called the virgin hop. When they are ripe, the stalks should be cut off 2 or 3 feet from the ground, and the poles are taken away with the plant to gather them from the cones. It is seldom that a hop-field bears well, or has all its strength, till the third year, and the strength of the fruit increases in proportion as the plant grows old; as it lasts from 10 to 15 years and more, the quality of the fruit improves every year.

Hogs, and other domestic animals, make great havoc in a hop-field; it should therefore be surrounded by a hedge. The hop is subject to various diseases; such as the *cancer*, (canker,) the *miellée*, (honey-dew,) without speaking here of the many kinds of insects which destroy the leaves and roots.* The remedy for the first (canker,) which consists of a mushroom formed at the root. causing the plant to wither, is to renew the plant. The second evil (meillée,) is produced by the development of a resinous matter which draws thousands of insects, which blacken the leaves, stalks, poles, and even the ground, by the fall of their excrements. This disease is in some measure epidemical. Yet the plant does not die, and has not always the same disease the next year.

The hop harvest comes on about August or September, according as you have cultivated the early or late kind. You may ascertain their ripeness. 1st. By the cones changing their colour from a greenish to a brownish yellow; 2d. When they have a very strong odour; 3d. When they are very clammy; 4th. When you find between the leaves which form the cones, a farina which adheres to the fingers; 5th. When the seeds are hard and brown.

This *crop*, or harvest, ought to be gathered in a dry season; for during rain, mist or dew, they mould easily; for this reason many hands should be employed. The vines should be cut two or three feet from the ground with a sickle well sharpened, taking care not to stir the root; the poles should then be taken away with the hop, and laid carefully on the ground: the stalks must be cut the length of the poles.

If the weather is fine, they may be gathered from the cones immediately. By this means the hops are not so much shook, and retain better their farina and seeds For this purpose you should have wooden frames (tressels,) to put the poles on; underneath put a cloth to receive the cones as they are gathered. You should not take down more than you can secure in the day. The cloth filled with hops must be taken to the house, and put on the floor in an airy situation. If the weather is damp, the stalks, with the fruit on them, should be taken away in a cart and put in a suitable place; but they must not be left long in a heap for fear of their being overheated, which would destroy the [illegible] and good taste of the fruit Gather them as soon as possible, and separate those which are not entirely ripe, and be careful not to leave among them any stalks or leaves; these give the beer a bad taste. As soon as you gather a basketful, spread them as thin as possible on a floor, dry and well swept; stir them every day till they are dry; take care not to shake them too much. During this operation, the windows should be kept open, if the weather is dry; but if it is damp, the doors and windows should be shut As they dry, they should be heaped up a little, and finally they must be put in large heaps, which must be stirred once every day with the handle of a rake, to prevent their heating; they should then be covered with a linen cloth.

The hops are sufficiently dry when the ends of the cones are hard and brittle. It is necessary to attend to this point, that they may be immediately protected from the sun and air, which injures their quality; for the hops then turn brown and are unsaleable. The English dry them on boards made expressly for that purpose; but the best way is to dry them in the air. I learn, says the author, by a notice communicated by Col. Charpentier, of Haguenau, that he has tried to dry them in madder kilns, but does not find this a good method, because the hops turn quickly brown, become very brittle and lose easily their leaves in packing them away.

When they are dry, they must be put in bags or casks; but before you proceed to this operation, you should spread them a little in damp weather to make them soft or tough, so that they may be less brittle and bear packing up better. These bags and casks must be put in a dry and airy place, where the hops may be kept many years.

After the hops are gathered, the poles must be put away in a dry place, and the hop roots covered with mould, and covered again with earth. In the following spring the same directions should be followed which I have given above.

The duration of a hop-field is not well ascertained; but the author has been informed that there are some at Haguenau which have been planted twenty years, and still produce well. It is not for beer only that the hop is useful; (its uses extend much further,) besides the leaves, which are used as medicine, and the young shoots for cooking—the stalks, after the fruit has been taken off, may be used with great advantage to tie the hop itself, to bind bundles of wood, brooms, &c. After steeping them in water 24 hours, they easily separate in many parts, and are used in Sweden and Lithuania as a substitute for hemp and ropes. This at least we read of in the Memoirs of the Academy of Stockholm, for the year 1750; where we learn, also, that the stalks of the hops when steeped, make as good a thread as the nettle, longer than hemp, and that the inhabitants of Jemtieland and Medalpadia make linen and ropes of them. They take stalks of the length of a yard, and even a yard and a half, and steep them all winter. This operation finished, it is prepared for carding like hemp or flax. We are assured that the linen made of it is as beautiful as that made of these two plants, except that it is of a reddish colour, as there has not yet been any means discovered to bleach it.

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* Hops are liable to be affected by many diseases, besides the influence which is produced from a variety of insects, and particularly the *aphis*, which take up their abode on the leaves of the plant. The first is called the soot, a black byssoidal substance, which covers the upper surface of the leaves, and more especially during very hot weather. This black substance has been found by modern botanists to belong to the family of *alga*. Mr. Persoon, in his Mycologia Europœa, tom. 1, p. 9, designates it as the *Fumago Vagans;* he defines it as follows: crustœformis, nigra, ex materie subcompacta, fibrillis-raris intertexta, formata, foliis afflata; and he adds "in the beginning of summer and fall, but especially in very hot weather, the leaves of the linden, maple, elm, poplar, oak, alder and willow trees are found covered with a black substance, as if they had been exposed to smoke"—it is published in the "7th fascie. Stirp. Cyptogamia Vogeso—Rhemanœ, No. 690, under the name of *fumago foliorum.*" In the month of September last, the leaves of all the linden trees which ornament our public walks, were covered with this *fumago*.

The second disease to which the hop is subject, is the *erisyphes* of hops, belonging to the mushroom family, and which is so well described by M. de Candolle, in his Flore Francaise, tom. 5, p. 106. This mushroom substance grows on the under part of the hop leaves, in numerous filaments, irregular, and of whitish colour; the parts affected by them show a spot of pale red. This mushroom, as well as its destructive effects on the hop, did not escape either Linnæus or Ehrhardt—the former calling it the *Mucer Erysiphe humul*, the latter *Albigo humuli*.

Latterly a German author, Dr. Wallroht, of Halle, in Saxony, has made this species of the mushroom the subject of a monograph, which is inserted in the 1st vol. of the Memoirs of the Society of Natural History at Berlin, 1819; he calls the species which is found on the hop, *Alphitomorpha macularis*. These little beings, by the aid of a magnifying glass, present a form of elegant structure.

(The above note was communicated to Mr. Ferrusac by Mr. Nestler.)

[From the New England Farmer.]

(*Concluded from p. 269, American Farmer.*)

BRIGHTON CATTLE SHOW.

No. II.

THE Committee on all other Stock than Bulls and Fat Cattle, consisting of Messrs. J. Welles, Luke Fiske, and Thomas Williams, report, that they have seen with pleasure the general improvement of the stock which has been successively of late exhibited at the Brighton Cattle Show. This has been the result of an increasing ardour in competition, honourable to those who act under its influence, and most beneficial to the community. If (as might well be the case,) many more of our good stock, with our household and other manufactures, were exhibited, an increasing interest might be given to this holiday, adding still more to its influence and utility. Enough, however, has been already shown, to convince those who look to these great sources of our national prosperity, that they will not be neglected by an intelligent people.

In the examination of stock, the committee began with milch cows, and after a careful comparison, were induced to award the *first premium* of $30 to *George H. Hardy*, of Waltham. This cow did not exceed the middle size, was of native stock, 7 years old, and for some months after calving gave about 18 quarts of milk. For nearly four months she averaged 11¾ lbs of butter a week. In July last she gave 46 lbs. of milk; she now affords 42 lbs. and holds out over 3 quarts of milk to nearly the time of calving.

The Committee award the *second premium* of $20 to the *Rev. John White*, of Dedham. This cow was of native stock and of middle size, and gave 12 lbs. of butter for six weeks in succession. In one week 12 lbs. 13 ounces was made from her milk. For three months she averaged 10¼ lbs. of butter; in the best of the season over 18 quarts of milk. These cows were so alike and both excellent, that the committee might well feel at a loss. The former was preferred, from holding out her milk for a rather longer period, and some other slight causes.

The committee award the *third premium* of $15 to *Nathan Pierce*, of Salem. This cow was of great product in milk, and had given by statement 3528 quarts of milk in a year, being an average of nearly 10 quarts a day. Her milk appeared rich, and well suited for the dairy, certificates of which were furnished from several who had used of it. But it was not sufficiently shown how far she was of value in this particular, which is most essential

There were some other cows of great product, which might have competed, or been preferred even to those to whom the premiums have been awarded. But the representations offered, on which a judgment was to be formed, were too general. They were sufficient, however, to induce your committee to infer that they probably were very superior animals. There were several other milch cows offered for premium, some with calves in high order at their sides. But in these cases, though adding to the interest of the show, your committee found in many respects a want of those circumstances and of that precision which would be requisite in order to make them proper subjects of consideration.

The cow exhibited by the Rev. Dr. Foster, of Brighton, called Flora, was a very fine one, giving nearly 18 quarts a day of rich milk. The pens contained several other fine cows for exhibition only.

Of the *heifers in milk*, your committee were of opinion that the first premium of $15 should be awarded to *Ebenezer Niles*, of Boston, for a very fine heifer of the hornless or Galloway breed, the sire Cœlebs. This animal would have received, we are authorized to say, the first premium last year for heifers, but she was by mistake inserted for exhibition only. Her excellence now is better established.

The second premium of $10 for heifers in milk, the committee award to Josiah Seaverns, of Roxbury, for his heifer from a native cow. Her sire the imported Alderney bull, given to the society by John Hubbard, Esq., now in the possession of Mr. Parsons.

These heifers were of strong promise.

The premiums for heifers the committee award as follows:

To Benjamin Harrington, of Princeton, for his heifer 18 months old, the first premium of $12—the dam native, the sire Holderness.

To Wm. H. Prentice, of Boston, for his twins about 18 months old, from a fine native cow, $10—the sire Cœlebs. The second for his red heifer, $10. The third for his red roan heifer, 8 dollars.

To John Prince, Esq., for his heifer from Denton, about 18 months old. The cow native—the 4th premium $6.

The committee, before they pass to other stock, may be indulged in the remark, that to those who favour the improvement of our own native stock upon a well governed selection from them only, the exhibition this day of milch cows must have been gratifying.

On the other hand, the heifers in milk and the other young stock afford room for the most ardent anticipation of great and increasing improvements from the imported stocks. Much is doubtless to be effected in both modes. The able and interesting discussion before the public on this subject, cannot but awaken and excite to more multiplied courses of experience, and thus lead us to more satisfactory and certain results.

As to Sheep, your committee made as careful an examination of the merinoes, from Saxony and elsewhere, as was in their power; and they award,

The first premium for a merino ram of the Saxony breed to Joseph Barrett, of Concord, $15.

The 2d premium to the same gentleman, for his merino ram, $10.

For a flock of merino ewes, the 1st premium to the said Joseph Barrett, $20.

The 2d premium for do. to George M. Barrett, of Concord, $10.

There were exhibited a fine specimen of long woolled sheep by Major Jaques.

Mr. Shepherd, of Northampton, also exhibited a beautiful pair of twin lambs, male and female, of the improved Leicestershire breed. As these were not imported, but brought from a neighbouring state, and there bred, your committee were reluctantly compelled to consider them as not entitled to premiums.

Of Swine, the exhibition was of a very improved character. The pens were crowded with them A breed of hogs with small bones and subject to little waste, quiet and disposed to fatten and yet of great weight, were found to have taken place of the long, lank, coarse, greedy and insatiable animal, with which our country has been infested.

The committee award for the best boar, to Silas Dudley, of Sutton,

The 1st premium, ...	$12
The 2d do. to George M. Robbins, . .	8
The 3d do. to John Parkman, of Brighton,	5

The committee award

For the best sow to Capt. John Mackay, .	12
For the next best to Silas Dudley, of Sutton,	8
To Moses Bright, of Watertown, the 3d do.	5
For the best store pigs to Capt. John Mackay, of Weston, the 1st premium of . .	10
The 2d to Jonas Cutter, of Weston, . .	5

Of the stock presented for exhibition, the committee noticed a beautiful cow of the hon. William Gray.

There were several heifers of Mr. Parsons' full and part blooded, which were deservedly admired.

Of animals not strictly within the authority of the committee, they will be excused for noticing, as adding to the show, the beautiful *mare* and horse colt, generously presented to the society by Admiral Sir Isaac Coffin.

A blood mare with a mule by her side, was exhibited by S. W. Pomeroy, Esq.

A fine mare colt was also exhibited by Major Talbot, of Dedham.

The committee were gratified to perceive a general improvement in the stock offered for inspection at the Brighton cattle show; and they think the community have much to expect from efforts so well guided.

All of which is submitted.

Per order, JOHN WELLS, *Chairman.*

No. III.

The Committee on the Ploughing Match of two yoke of oxen, consisting of John Prince, Nathan Adams, of Medford, and Daniel Adams, 3d. of Newbury, report, that six teams only appeared to contend, (eleven having previously retired,) viz:

No. 1. Silas Dudley, of Sutton—plough made by Warren, of Dedham—work done in 31 minutes.

2. Samuel Sibley, of Sutton—plough by Hall Sutton—work done in 35 min. 30 sec.

3. Sherman Barrett, of Concord—plough of cast iron by *Tice*—work done in 35 minutes.

4. Joseph Curtis, of Roxbury—plough by Warren, of Dedham—work done in 35 minutes.

5. Aaron D. Williams, Roxbury—plough by Warren, of Dedham—work done in 39 minutes.

6. Stedman Williams, Roxbury—plough by Warren, of Dedham—work done in 33 minutes.

The lots were exactly one-eighth of an acre; the land only two years since laid down, and very thin sward, that the committee apprehended handsome work could not be effected. They are gratified, however, in stating, that by the skill of the ploughmen and drivers, and the great docility of the cattle, the work was extremely well performed.

They were very particular in directing that the cattle should not be hurried, and forty minutes were allowed for the task. They have been unanimous in deciding the premiums, and hope the unsuccessful competitors will not be deterred from trying another season.

They award the first premium

To Sherman Barrett, of Concord, . .	$15	
Himself as ploughman, ...	8	
Prescott Barrett, driver, ...	4	
		—27
2d. To Aaron Davis Williams, ...	10	
Eben. Lord, ploughman, ...	5	
David How, driver, ...	3	
		—13
3d. To Samuel Sibley, of Sutton, . .	6	
Ditto, as ploughman, ...	3	
Benjamin Woodbury, driver, . .	2	
		—11

It is wished by the committee to remark, that the first premium was gained by a *cast iron* plough—taking into consideration the great saving in *repairs* for a length of time, they cannot but take pleasure in recommending cast iron ploughs to their agricultural brothers.

(Signed by) JOHN PRINCE,
NATHAN ADAMS,
DANIEL ADAMS, 3d.

Brighton, Oct. 20, 1825.

No. IV.

The Committee on Inventions, report, that the entries on this head were uncommonly few.

Two yokes were offered for premium, the one by Leonard Dodge, of Sutton; the other by Moses Bellows, of Shrewsbury; both of fine workmanship and very creditable to the mechanics who made them; but, as far as the committee could perceive, neither possessed qualities so different from other yokes as entitled them to any premiums as inventions, and no persons were in attendance to explain the peculiar advantages resulting from the particular difference perceptible between these and common yokes.

A plough was also entered for premium by Mr. Stephen R. Phelps, of Marlborough. This plough appears to be a patented invention originally made in New Jersey. The great peculiarity of this plough consists in making the nose or point of the plough independent of the share, and connecting it with a bar of steel, which can be moved forward by means of screws, as the nose or point wears, and being inverted, causes the action of the plough to counteract the effect of the wearing, and hence keep itself in working order better than the ordinary ploughs. From this circumstance, this plough is denominated the self-sharpening plough; and the committee think that the invention, if it have the effect asserted, and which from its construction seems likely to be the case, must be an improvement of that important implement of agriculture.

Your committee, however, had no evidence of the instrument's having been used and approved by practical farmers; and therefore do not deem it within their authority to grant a premium.

Mr. J. P. Miriam, of Concord, also presented for premium a hassock cutter and plough cutter.

Both of them your committee cannot doubt to be useful in the particular soils for which they are constructed. But no certificates of use and approbation by practical farmers attended either; and besides, neither instrument seemed very materially to differ from a species of instrument not uncommon in England, and which have been used in this country. At least the difference was not such as to entitle either of them to a premium under the head of inventions.

Robert S. Babcock, of Roxbury, presented for premium several hay forks, of a very excellent and improved quality and form, and, in the opinion of your committee highly worthy of patronage by intelligent agriculturists. - They are of steel, of an excellent quality; the tines round, and in their shape and bend, and balancing on their handles superior to any hay forks your committee have seen. They are connected with their handles by a long ferrule, and inserted into them with great strength and security.

One great advantage they possess over the common patented steel fork, is, that they are more easily repaired, if broken; whereas the former, so far as we have had experience, or been informed, when broken, are in general considered as lost.

John Prince, Esq., of Jamaica Plains, who has used these forks for two or three years, expressed his entire acquiescence in all the above particulars, considering one of them worth any two forks of any other description he had ever owned.

Considering the importance of this instrument, and the excellence of the improvement, your committee award a premium to Mr. Babcock of $10.

Mr. Pope's threshing machine, which on a former occasion received a premium, was presented for exhibition, accompanied by certificates of its success and usefulness which were both gratifying and encouraging.

A very curious machine for the purpose of making mortises was presented for exhibition, by ——, which your committee can have no question will be a very useful instrument, though it does not come within the sphere of the society's premiums.

Messrs. Halliday & Ewing, of Boston, presented for exhibition blocks for printing calicoes of an excellent workmanship; and executed in a style which cannot fail to do them great credit, and to insure them encouragement in those important manufactures towards which their ingenuity is directed.

All which is respectfully submitted by

Oct. 19, 1825. JOSIAH QUINCY.

No. V.

The Committee on Manufactures, consisting of R. Sullivan, Samuel Appleton, George Searle, and John W. Boott—adjudge,

For broadcloth,	
To Messrs. Slater & Howard, of Dudley, 1st. premium	$20
To the Walcott Woollen Manufacturing Company, 2d. premium . . .	15
For cassimere.	
To Messrs. Slater & Howard, the 1st. prem.	$12
For woollen cloth and household manufacture,	
To Nathan Barrett, jr. of Concord, the 1st. premium	$12
To Ephraim Fuller, of Lancaster, the 2d. do.	8
For flannel,	
To Mrs. Noah Strong, of Norwich, the 2d. premium	$7
For carpeting,	
To Eliza Warren, of New Braintree, the 1st. premium	$15
To Sybil Wilcox, of New Braintree, 2d. do.	7
For stair carpeting,	
To G. Delano, of New Braintree, the 1st. premium	$10
For blankets,	
To Betsey Delano, of New Braintree, the 1st. premium	$6
To Mrs. John Hunter, of do. the 2d. premium,	4
For diaper,	
To Eliza Warren, of New Braintree, the 2d. premium	$5
For linen sheeting.	
To the Misses Leonard, of Sturbridge, the 1st. premium	$8
To Sarah Wilcox, of New Braintree, 2d. do.	4
For sewing silk,	
To Emily Fitch, of Hopkinton, the 1st. prem.	$5

The Committee award a gratuity to

Mary Simonds, of Dorchester, for a bed quilt,	$3
Lucy H. Brooks, of Lincoln, for a counterpane	3
Sarah A. Houghton, of Brighton, for a patch quilt	2
Mrs. Gleason, of New Braintree, for large coverlets	3
Mary B. Temple, of West Boylston, for a counterpane	2
Mrs. C. Paige, of Newburyport, for a counterpane	3
Mrs. Davis, of Boston, for a rug . .	2
Sylvia Harding, of Boston; Jane Coburn, of Dracut; Susan Thayer, of Natick; Mary Newell, of Watertown; Eliza Williams, of Deerfield; and Mrs. S. Bott, of Salem, for hearth rugs of good quality, each .	1
Hannah Eaton, of Dedham, for a man's hat made of the palm leaf, more durable than the common straw hat . . .	2
Jane Riley, of Boston, for fine linen thread,	1
Elizabeth Hapgood for straw hats of rye straw,and hat from spear grass . .	3
Nancy Goodwin, of Middleborough, for a grass bonnet and netting fringe . .	1
W. Davenport, of Concord, for various and beautiful samples of silk buttons. . .	4
Sally Howe, of Marlborough, for a specimen of bags woven without seam in a common loom	2
Abigail Kilburn, of Lunenburgh, for a very fine straw bonnet	3
Elizabeth W. Childs, aged 12 years, for a lace veil	1
Columbian Manufacturing Company for a specimen of straw bonnets of fine quality,	3
Abigail Sadler, of Hopkinton, for a fine straw bonnet	3

Beautiful specimens of fine needle work were noticed by the Committee:—

A veil and cape by the Misses Rider, of Boston.

Lace veils by Abby Harris, of Boston.

Lace veils by Maria D. Moore, of Newton.

A lace veil by Lucy Ann Howe, of Hopkinton.

Fancy baskets by Catherine Flagg and Mrs. P. E. Converse, of Woburn.

An imitation India dress by Miss J. G. Smith, of Boston.

A thread lace veil by Evelina Penniman, of Boston

Specimen of knit work, by Miss M. Starbuck, of Nantucket.

A lace veil by Miss S. S. Baxter, of Boston.

A lace veil by Sarah B. Steadman. of Boston.

A specimen of work by Sarah S. Savage, of Lancaster.

Lace veils, lace and fine work, by Lucy Cotting, Dorcas C. Fay, Merian S. Hayden, Maria S. Rogers, Merian L. Rogers, Hester Billings, and Hannah M. Johnson, all of Boston.

The object of giving gratuities in money being to encourage manufactures of more general utility, as well as to reward ingenuity and household industry, the Committee fulfil their duty in mentioning the names of ladies who have embellished the exhibition with ornamental works of taste.

Three pair of shoes presented by Cushman Bassett, of Boston, were of first rate workmanship.

A beautiful specimen of sewing silk, with a reel of raw silk, were exhibited by Mrs. Harris, of Dorchester.

Mrs. George Adams, of Newbury, presented a piece of worsted plaid made from the wool of the long wool Netherlands sheep, given to the society by Thomas H. Perkins, Esq. It was considered a good imitation of Scotch plaid, and a new manufacture in this country.

The Exhibition was enriched by samples of foolscap and letter paper of excellent quality presented by Mr. Andrew J. Allen, and by T. G. Fessenden, Esq. from the mill of Holbrook & Fessenden, Brattleborough, Vermont.

Four pieces of flannel were sent by the Amesbury Flannel Manufacturing Company—white and coloured. The Committee did not hesitate to pronounce them equal in all respects to the best English flannels. The Committee were informed that a discovery has been made recently at this factory, by which the red colour from madder is freed from the yellow tinge common in red flannels.

Seven pieces of printed silk handkerchiefs were handsome specimens of printing, and the colours brilliant and in good taste.

A piece of undressed flannel was presented by Moses Learned, of Palmer, with samples of the wool of his flock. The flannel being in an unfinished state, the Committee could not consider it an object of premium. The thread was very fine and the fabric good. Mr. Learned has practised clothing his sheep three years:—a cloth of cotton or coarse canvas is put on immediately after shearing and kept on until the next shearing. The last season he blanketed, as he terms it, 175 sheep. He believes that the animal thrives better for this protection, and that the advantage from keeping the wool in a cleaner state, and having the pile soft and good to the extremities, more than pays the expense of 16 cents per head,—the estimated cost of clothing.

Samples of writing and drawing pencils were offered by Messrs. Melvin & Blood of Concord, accompanied by certificates stating that these pencils have the essential qualities of a good article, being both tough and soft, and are durable when cut to a long and slender point.

The Roxbury Colour and Paint Manufacturing Company, presented by Joseph R. Newell, their agent, several samples of brilliant colours, of their manufacture. Their establishment is the first of the kind within the state, and is said to meet with the most encouraging success.

RICHARD SULLIVAN,
SAMUEL APPLETON,
GEORGE SEARLE,
JOHN W. BOOTT.

No. VI.

The Committee on Agricultural Experiments, to whom was also committed the inspection of sundry articles of manufacture, for which premiums were offered, Report, that seven parcels of cheese, of more than one year old, and nineteen parcels of new cheese. were offered for the Society's premiums; with the exception of one parcel of old and one parcel of new cheese, all of it was from the town of New Braintree, in the county of Worcester. The new cheese is superior in flavour and richness, to that offered the last year. Of the old cheese, that from the dairy of Mr. Benjamin C. Perkins, of Becket, in the county of Berkshire, was considered by your Committee to be the best; and they award to him the premium of ten dollars Your Committee could not, on thorough examination, find any parcel of old cheese which in their judgment was sufficiently good to be entitled to the second premium; they are aware that great care and attention is required to preserve cheese for any considerable length of time uninjured in its flavour; and they are not unmindful that the past season, from the extreme heat of the weather, has been unfavourable to the preservation of cheese; still they are of the opinion that the interest of the farmer would be greatly subserved by having a proper deposite for his cheese, in which the temperature of the air should vary as little as possible through the year.

Eleven parcels of butter were entered for premium, none of it such as your Committee deemed to be of the very first quality; some of it being too highly charged with salt; and from several of the parcels the buttermilk was not sufficiently expressed; that from the dairy of the Rev. Lemuel Capen, of South Boston, was considered to be the best; and your Committee recommend that the premium of fifteen dollars be paid to him; the premium of ten dollars, to Mr. Michael Crosby, of Bedford, in the county of Middlesex, for the next best; the premium of seven dollars, to Mr. Luther Chamberlain, of Westborough, in the county of Worcester, for the next best; and the premium of five dollars, to Mr. Jacob Dean, of Mansfield, in the county of Bristol, for the next best.

Ten samples of currant wine were entered for premium, most of it superior to any offered last season; and with two or three years' additional age, would fall little short of the best light wines of Europe; the red wine made by John Prince, Esq. of Roxbury, was considered to be the best; and is entitled to the premium of ten dollars; the white wine made by Mr Kenrick, of Newton, the next best; and is entitled to the premium of five dollars.

Four barrels of cider were entered for premium; none of which was deemed to be of the first quality; that made by Colonel Daniel Leland, of Sherburne, in the county of Middlesex, was adjudged to be the best; and is entitled to the society's second premium, being ten dollars. Your Committee cannot refrain from offering it as their opinion that little or no improvement has for several years past taken place in the making of cider; a liquor the use of which would be much increased, was more attention observed in manufacturing it; in such case it would without doubt be, to a very considerable extent, substituted for ardent spirits; the great consumption of which in this country, is exceedingly to be deprecated—sufficient attention is seldom paid to cleansing the casks into which the cider is to be put.

Several hives of honey were entered for premium; that offered by Mr. Ebenezer Fitch, of Sterling, in the county of Worcester, was not considered to be of the very first quality; but having proved to the satisfaction of your Committee, that he had taken up the present season on his own farm, two hundred and sixty-six pounds of honey, they recommend that the premium of ten dollars be paid to him. Mr. Ebenezer Withington, of Dorchester, took up the present season, on his farm, seventy pounds of honey of good quality, "made by one hive of bees in forty-one days." Mr. Samuel Brigham, of Southborough, exhibited a glass hive excellently well constructed, and containing a large quantity of honey in the comb, the bees being still alive; these industrious manufacturers will keep possession of the premises until the spring when they will resume their labours. Mr. Brigham took up on his farm, the present season, one hundred and eighty pounds of honey.

Four cases, containing canisters of mustard, manufactured and exhibited by Mr. John P. Webber, of Beverley, in the county of Essex, packed in a very neat manner for transportation; on trial it was found to be of an excellent quality, not inferior in the opinion of your Committee to the best imported Durham mustard.

THOS. L. WINTHOP,
JOHN TAPPAN,
WM. PRESCOTT,
BENJAMIN GUILD.

The further claims for premiums on agricultural experiments will not be decided upon until the Trustees' Meeting, in December next, affording time for the competitors to exhibit the evidence required—soon and hereafter the Committee will make an additional report.

No. VII.

The undersigned, a Committee appointed to test the merits of the Working Cattle, and award the different premiums, have attended the duty assigned them, and Report as follows, viz:—Fourteen yoke of cattle appeared on the ground, and had been regularly entered. Several persons who had entered their cattle were prevented attending in consequence of sickness in their families. One yoke was rejected, having received one of the premiums last year; the cattle at that time were three years old. Trial was made on the ground used several years past for that purpose. The wagons with their contents of stones, weighed five thousand pounds, the weight drawn by each yoke of cattle. Your Committee, after a careful trial, and, as they hope, discriminating correctly, award the following premiums, viz:—

To John Scammel, of Bellingham, the 1st. premium	$25
To Perley Tapley, of Sutton, the 2d. do.	20
Benj. Woodbury, of Sutton, the 3d. do.	15
Royal Marble, of Sutton, the 4th do.	12
Samuel Sibley, of Sutton, the 5th. do.	8

Your Committee considered the cattle as superior to any exhibited at any former Cattle Show in this place; but in training, particularly in backing with a load, they were sorry to observe a great deficiency.

All which is respectfully submitted by

GORHAM PARSONS,
SAMUEL G. DERBY,
ELIJAH PERRY.

PATENT COTTON PRESS.

The subscriber respectfully informs his friends and the public in general, that he has invented *a new and useful machine, for the purpose of Packing Cotton into square bales, by the power of a lever, acting on a fulcrum, which drives the follower that presses the cotton into the bale.* The power of this machine is such, that from 450 to 500 pounds of cotton can be pressed into 5 yards of 42 inch bagging, with considerable ease, and in a very short time. The superior advantages of this machine are clearly manifest, that in addition to the small quantity of bagging required, *(which certainly is an object,)* two hands can with great ease pack from eight to twelve bales in one day, if the cotton is convenient, by having some assistance in sewing, which is by far the most tedious part. The simplicity of this machine, and its superior power, are greatly admired by mechanical artists, and in fact all who have seen it. By a mechanical demonstration it is proven, that the power of the lever and its concomitants, are equal, if not superior to any, even to the wedge, if properly applied.

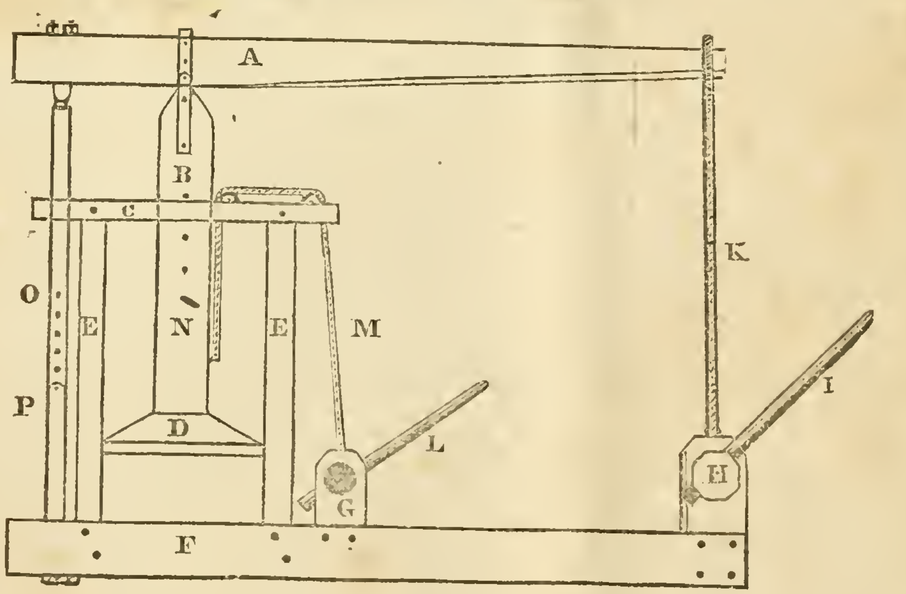
From the high and frequent encomiums passed on the invention, the subscriber is induced to offer it to the public as something worthy of their immediate notice. Any person that may want, can apply to the subscriber. The probable cost will be *fifty dollars,* when all the materials are found, and *eighty,* if not found. Patent letters having been obtained from the Department of State of the United States, all persons are prohibited from making or using the same without legal right. All infringements will meet with the rigor of the law, made and provided in such cases. Any mechanic that may wish to be benefited by the invention, may, by paying a very moderate sum, secure individual county or state rights. The same is offered to farmers and all others.

The size of the machine is sixteen feet long, three feet wide, and can be used in a house of sixteen feet pitch, or brought so near the outside that the cotton can be conveyed by a tube from the gin to the press.

LEWIS LAYSSARD.

Halifax, N. C., Sept. 28, 1825.

Layssard's Patent Cotton Press.



DESCRIPTION.

A. The lever.
B The fulcrum.
C. The cap sill.
D. The follower.
E E. The two cheeks of the machine.
F. The floor of the machine.
G. The windlass, to wind up the cord that raises the fulcrum.
H. The windlass, which carries down the rear end of the lever by the rope K.
I. The large handspike that turns the windlass H.
K. The rope that brings down the rear end of the lever by the windlass H.
L. The small handspike, that turns the windlass G.
M. The rope that raises the fulcrum.
N. The pin that keeps the fulcrum up while putting cotton into the press.
O. The iron bars which resist the fore end of the lever.
P. The pin to lengthen or shorten the bars.

FEEDING HOGS WITH COTTON SEED.

Mr. Editor, *South Carolina, Oct.* 20, 1825.

In one of your late numbers, a writer from this state, wishes some information relative to the destruction of hogs from eating cotton seed. He must pardon my great surprise that so valuable a manure should ever be thus suffered to produce such injury, instead of being carefully preserved for the increase of the product of our fields. Some years since I was made acquainted with the following plan, not only to prevent such bad effects to the hogs, but to fatten them; and, by feeding them two weeks before they were killed, with corn, good bacon was obtained at a cheap rate. I have never tested the plan by an experiment. The cotton seed is to be thrown into *water*, in a canal or pond, and the hogs are only allowed to eat the seed in the water. The seed, from undergoing fermentation in part, or rotting, may then produce no bad effects to the hogs; and if the deleterious effects are prevented, we know they will fatten, from the quantity of oil they contain. Your present volume contains two interesting pieces on the husbandry of cotton, from this state; especially as they coincide with my own, as respects the propriety of late and frequent hoeings, of the crop of cotton. On two points however, I would *solicit* more precise information, viz. the quantity of land cultivated to each hand, of cotton, and provisions, &c. the proportion of *ploughs* to the hoe hands.

I have never been able to hoe my cotton fields more than four, six, or seven times, according to the early or late planting of the fields. But I do not plough the cotton,* and plant six acres of cotton and five of provisions to each hand, the lands of a light soil, and I generally have in cotton, one-third of new land, or such as have rested one, or two years, which lands require less culture. The *caterpillar*, has this season, produced great destruction to the cotton crops of this state, especially on the islands. The frost of *yesterday* will no doubt destroy them, and will also injure the late pods—particularly on late planted, or new grounds. As this writer has used the same signature, under which I have, for some years past, endeavoured to call the attention of my brother farmers, to subjects connected with the agriculture of our state. I will subscribe myself, your old correspondent A Cotton Planter.

DORCHESTER COUNTY CATTLE SHOW.

We were much gratified with a catch view of the Dorchester County Cattle Show, held in Cambridge on Thursday and Friday last.

The exhibition could not be expected to be very large, being only from a single county. But the stock of cattle and hogs was particularly excellent. There were five young bulls of the improved breeds, three of Teeswater, bred from Mr. Lloyd's and Mr. Lima's stock, and two of Devon blood. A half blood Devon 12 months old, out of a half blood short horn cow, by an imported bull, was particularly fine—and the other half blood Devon was very remarkable for size, as large, if not larger, than well grown short horns of the same age.

The exhibition of domestic manufactures, particularly in carpets and hearth-rugs was very beautiful. The butter generally good, and several samples particularly fine.

We listened with pleasure and riveted attention, which appeared to prevail through a numerous audience, to a learned and classical address from Dr. Muse, on the general topics of agriculture. The whole scene gave good evidence of an awakening spirit to the best interests of our country.

[*Easton Gazette.*

LONG-WOOLLED SHEEP.

Messrs. A. & A. Lawrence have imported by the brig Congress, which arrived here yesterday from London, sixteen Lincolnshire, and South Down Sheep, viz: 10 bucks and ewes of the former breed, and 6 of the latter. We understand they were carefully selected from the best flocks in Lincolnshire and Surrey, for the purpose of introducing into this country the very best qualities of wools of these descriptions. We believe they are the first sheep of these kinds which have been imported into this state. We understand they are intended to be sold, and we have no doubt the opportunity will be gladly embraced by some of our farmers, to introduce these descriptions of wool by propagating the breeds now imported, and crossing them with our native sheep. The long wool is quite important, and even necessary for the success of certain branches of manufacture, which will undoubtedly be established among us, as soon as a sufficient supply of the proper wool is obtained.

[*Boston Daily Advertiser.*

LADIES' DEPARTMENT.

GENERAL OPERATIONS OF COOKERY.

BROILING.

Another process in which meat is subjected to the immediate action of fire, is broiling, which at first seems not to differ from roasting. The effect on the meat is, however, considerably different. The process consists in laying chops, or slices of meat, on clear burning coals, or a gridiron placed over a clear fire. It is indispensable that the chops or slices be moderately thin, otherwise the outside will be scorched to a cinder before they are cooked within; from one fourth to three fourths of an inch is a proper thickness.* It is also necessary that the fire be moderately brisk, without smoke or flame, lest the meat should acquire a smoky taste. When a gridiron is used, it ought to be thoroughly heated before the slices or chops are laid on it, to prevent them from sticking to the bars. In order to broil them equally, they must be turned from time to time, till the cook can easily pierce them with a fork or sharp skewer, which is the test of them being sufficiently cooked. It is improper, however, to cut into the chops to ascertain whether they are broiled enough, because it lets out the gravy.

Coke is the best fuel for broiling, for it does not emit any smoke, and gives a clear and moderate heat; a mixture of coke and charcoal is exceedingly well calculated for the broiling process.

Those gridirons of the usual appearance and form, that have the bars fluted or hollowed on the upper side, by which means the fat that comes from the meat that is cooked on them, is prevented from falling into the fire and causing flame and smoke, are the best; for all the grease that runs down the bars is received into a small trough, which prevents it from being wasted or lost. The upright gridiron is a still better invention, as the meat cooked on it is entirely free from smoke, and the melted fat is still more easily saved, and kept more clean.

Rationale.—The heat being very quickly and directly applied, not gradually, as in roasting and baking, the surface of the meat is speedily freed from its watery juices, and the fibres become corrugated, forming a firm and crisp incrustation of fibre and fat. This crust effectually prevents the escape of the juices from within; namely, the gelatine, and the osmazome, which are more rapidly expanded by the heat than in roasting, and consequently must more violently dissever the small fibres among which they are lodged; the effect, however, is more mechanical than chemical, for it does not appear that any new combination is formed, nor much disorganization produced. Accordingly, it is found that broiled meat is more sapid, and contains more liquid albumen, gelatine, and free osmazome than the same meat would do if boiled or roasted. It is this greater degree of juiciness, sapidity, and tenderness, that constitutes the peculiarity and perfection of this mode of cooking, compared with roasting, baking, or frying in a pan.

Every sort of meat, however, is not fit for broiling. The chemistry of the process will point out the sorts best adapted for it. The flesh, for example, of old animals, which is deficient in gelatine and albumen, would be too much dried by roasting. The larger muscles, also, which abound in fibrous substance, such as the rump of beef, are well fitted for broiling. The flesh of game is likewise less juicy and gelatinous, and forms a very savoury dish when broiled. The process is peculiarly fitted for most sorts of fish, which roasting or baking would render dry and shrivelled, and in many cases boiling would make it too soft and pulpy. Fresh caught char, and trout,* are in the highest perfection when dressed in this way.

On the other hand, the flesh which abounds in watery juices and gelatine is not well adapted for broiling. The flesh of all young animals is of this kind; and accordingly lamb, veal, and sucking pig, the flesh of the fawn and kid, do not answer to be broiled but roasted. The same is true of all the parts of an animal, whatever be its age, which abound more in gelatine, albumen, and fat, than in red muscular fibre.

Broiled beef steaks was the established breakfast of the maids of honour of Queen Elizabeth. At an early period they gave strength and vigour to those who

"———————————— drew,
"*And almost joined the horns* of the tough yew."

FRYING.

Frying is a process somewhat intermediate between roasting and boiling. Indeed, in one sense, it may be termed boiling, as it is the application of heat to the substance to be cooked, through the medium of melted fat, raised to the boiling temperature. The effect on the meat is very peculiar, and easily distinguished from every other mode of cooking. The meat is prepared in the same way as in broiling, by cutting it into chops, or slices, of not more than half an inch or three quarters in thickness. A sufficient quantity of mutton or beef suet, butter, lard, or oil, being melted in a pan, and made boiling hot, the meat is laid in it. It is not necessary that the meat be *wholly* immersed in the boiling fat; if it be immersed in part, it will be quite sufficient. When flesh is the substance to be fried, the pieces, previously to their being put into the pan, are sometimes brushed over with eggs and the crumbs of stale bread, flour, or any other farinaceous substance. This application may also be made when the meat is nearly cooked. The intention of it is to cover the meat with a thin brown crust, the savour of which increases the relish of the dish. Fish are, for the most part, treated in this manner when fried. It answers well with trout, whitings, flounders, and soles. When this application is made to the meat previously to its being put into the pan, the peculiar flavour of the meat is more effectually retained. One of the best preparations for this purpose is oatmeal, flour, or crumbs of stale bread, made into a liquid paste with the yolk and white of eggs.

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* The implement invented by Mr. Smith for planting cotton, has attached to it a small blade on each side of the furrow, for weeding the cotton; which, if it answer its design, must save much of hoe-labour.—Ed. Am. Far.

* It is recommended by cooks to previously beat the raw slices with a mallet; but this practice is a bad one.

* The best way of eating mackerel, is to broil it in buttered paper upon the gridiron; and, when properly done, to put fresh butter in the inside, with chopped parsley, pepper, and salt, which melts, and adds an exceedingly good flavour to the fish.

Vegetable, as well as animal substances, are subjected to this process, though it is always at the expense of their wholesome and nutritive qualities; and not always to the improvement of their taste and flavour.

As in the case of animal substances, all the juices are, by frying, extracted from the vegetables; with this difference, however, that their place is not supplied by the melted fat; for the starch of the vegetables (potatoes for example,) is rendered insoluble in water by the fat, and exhibits a corneous appearance and texture. Fried potatoes are the most familiar instance of the process. When cut into thin slices and fried in oil, butter, or lard, they are rendered semi-transparent. Cabbage, or the stalks, leaves, and fruits of other vegetable substances, previously boiled and then fried, shrink, and become more easy to break, in proportion as the water is driven off from them, as this, during their previous boiling, dissolves the saccharine and amylaceous matter which rendered them supple and juicy. These principles are much better prepared and improved by boiling; they are very much deteriorated by the boiling fat in the frying pan.

The melted fat, or oil, should always be brought to the boiling point, or nearly so. The proper temperature is ascertained by putting into the fat a few sprigs of parsley, a thin slice of turnip, or a piece of bread; and if any of these substances become crisp without acquiring a black colour, the fat is hot enough for frying; if it be made hotter, it becomes blackened, and the meat acquires a burnt and unpleasant flavour. Any sort of hard fat, such as beef suet, is the best fitted for frying meat; because, fat of this description can be brought to a higher temperature, without suffering decomposition, than either lard, butter, or oil. There are, however, particular kinds of meat, which answer better with some one or other of these than with any of the rest. Fish, for example, is best fried in oil.

A rich brown colour is communicated to the fried substance, by pressing it, when nearly cooked, against the bottom of the pan.

The fire for frying should be kept sharp and clear, to keep the melted fat at a sufficient high temperature, and without this precaution the fried substance cannot be browned. If the temperature of the fat is not hot enough, the fried meat will be sodden. Fish cannot be fried of a good colour, and crisp, and firm texture, unless the fat is boiling hot

Frying, though one of the most common culinary occupations, is one of those that is least commonly performed.

Eggs are often fried.

"Fresh butter, hissing in the pan, receives the yolk and white together in its burning bosom. One minute or two and all the noise is over; and, sprinkled with pepper, salt, and a few drops of vinegar, they appear perfectly fit for the table. The *salamander* is often held over them, and accelerates the culinary process."

Rationale.—The process of frying is considerably different from those which we have formerly been examining. In frying, the high temperature of the melted fat has the effect of extracting (at least from the outer surface,) all the gelatine, osmazome and albumen, the place of which is, in part, supplied by the melted fat entering between the fibres, and gradually filling up the interstices. It is this circumstance which prevents the fibres of fried meat from becoming hard and dry, and preserves them in a tender and supple state. Meat which has been fried, shrinks more in bulk than when boiled or roasted, in consequence of the melted fat having a stronger influence in dislodging the animal juices. It is this also which gives the meat the structure which has not unaptly been compared to leather. Taste informs us, independently of our *rationale*, that fried meat is less gelatinous and less savoury, than when simply boiled or roasted. It is also less tender. The gelatine and other juices of the animal fibre, which are extracted during the process, may be discovered, after the melted matter in the pan is suffered to settle, in the form of a rich, brown, savoury jelly, which separates spontaneously from the rest of the substance. [*Accum's Cul. Chem.*

SPORTING OLIO.

[To sportsmen it is, of course, a point of importance to know the best length for the gun's barrel: and it is a matter of curious speculation and experiment, difficult, for obvious reasons, to be precisely and satisfactorily adjusted. We have already published some interesting original communications on the subject from esteemed correspondents, and we now add, from a late number of the Annals of Sporting, some reflections that appear to convey, as correctly as may be, the *rationale* of the question. *Mem.* ☞We had expected to hear again from our old friend who shot the bullet through the blade of the broad axe, as some young sportsmen appeared to be disposed to *skirmish* with him on the matter. Not doubting in the least that he could prove the verity of his declaration; it was corroborated in our minds by recent publications respecting the cutting of steel, or soft iron in rapid revolution. And who has not heard of shooting pieces of *candle* through inch boards?]

ON THE LENGTH OF GUN-BARRELS.

"But to return to the gun-barrels: it was at a period not very remote, generally supposed, that a great length of barrel was indispensable, if the shot was to be driven any considerable distance; and pursuing this train of idea, it was taken for granted, that the longer the barrel of the gun, the further the shot would be thrown; and hence we see, in many ancient halls and farm houses, gun barrels of such a length, that it is not without great difficulty they can be presented from the shoulder; some, in fact, require a rest, after the manner of the old harquebuss, when they are to be pointed at any object. A popular little book* contains my own ideas so exactly on the subject, that I shall not hesitate to transcribe the author's remarks: 'The length of the barrel is a matter which is involved in doubt, though abundant evidence has been obtained to prove that the antiquated notion of long barrels carrying the farthest is completely erroneous. After a great number of experiments, I have found that a barrel twenty-two inches long, of the common fowling-piece calibre, (five-eighths of an inch diameter,) shoots fully as strong, if not stronger, than any other greater length, though the difference between twenty-two and twenty-eight, or even thirty inches, is not very great; but for any increase of length beyond thirty inches, the difference or the decrease of force would very much surprise any person who had never witnessed the experiment I have shortened five different barrels, gradually, inch by inch, for instance, and the result has invariably been the same; and, in these experiments, great pains were taken in regulating the charge, so that, in this respect, no perceptible variation could take place. Nevertheless, though a barrel twenty-two inches long, (I have never tried one shorter,) may impel the charge with more force than a greater length, yet I prefer a barrel somewhat longer, as it is pleasanter to load, and the aim may be much better taken with it; yet, for my own choice, I would never exceed thirty inches.

"'At first sight it may be asked, how it happens that a long eighteen-pounder carries farther than a shorter cannon? To which it may be answered, that it is possible an increase of length might be added, with advantage, to the longest eighteen-pounder in the service; since, on comparison, taking into consideration the difference of the calibre, a fowling-piece barrel, twenty-two inches in length, is proportionably longer than any cannon whatever.

"'If the bore, or calibre, of the fowling-piece be made extremely wide, it will require a greater charge, and will, of course, admit of a greater length of barrel.'

"According to Mr. Robins, gunpowder fired in any space, acts nearly in the same manner as a quantity of air would do, which was condensed a thousand times more than the common air we breathe; and which, in that condensed state, filled the same space that was taken up by the unfired powder. Hence it follows, that the pressure of the powder on the shot grows perpetually weaker and weaker as the shot is further impelled before it: for, as the shot is impelled forwards, the inflamed powder occupies more space, and consequently its elasticity is lessened. In short, it is quite clear, if we reason upon the subject, that, in order to attain the greatest possible force, the shot should leave the muzzle of the gun the moment that the elastic fluid, generated by the explosion of the powder, has attained its greatest elastic force, or power of impulsion; if after this precise instant the shot has still to move farther up the barrel, it will have to contend against the lateral action, or friction, of the inner surface, as well as be directly opposed to the atmospheric air in front; and, therefore, a length of barrel beyond what I have already stated cannot accelerate, but must necessarily retard, the flight or force of the shot. But to ascertain the precise point of perfection in this respect will be found a very difficult matter, if it be not altogether impossible; as a variety of causes will be found to operate against what (for the sake of a better term) may be called mathematical demonstration; amongst the most prominent of which may be mentioned the quality of the powder, its great susceptibility of variation from the influence of the weather, and the state of the atmosphere at the time of making the experiments. Sufficient, however, has been satisfactorily shown to prove that long barrels are detrimental to the force of the shot; and that they consequently produce the very reverse of what they were intended to effect."

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* Johnson's Shooter's Companion.

THE FARMER.

Baltimore, Friday, November 18, 1825.

☞Those who, contrary to the terms of their subscription, have fallen in arrears for this journal, are respectfully assured, that they could not afford to the Editor a more acceptable evidence that their arrearage has not accrued from any want of satisfaction with the manner in which he has performed his part of the contract, than by transmitting the amount due, forthwith, by mail, at the Editor's risk.

When Saturday comes, the Editor cannot satisfy the paper-maker, printer, &c. by saying, ☞"certain subscribers have neglected to pay up!"

Internal Improvement of Maryland.

At a large and respectable meeting of the citizens of Baltimore, friendly to, and interested in the *Internal Improvement of the State of Maryland*, convened at the Exchange, at 12 o'clock, on the 14th inst. agreeably to advertisement in the several papers of the city, General S. Smith was invited to take the chair, and J. S. Skinner to act as Secretary to the meeting. The notice under which the meeting had assembled, having been read by the secretary, the chairman signified to the meeting, that such propositions as any gentleman might be disposed to offer, would be submitted for consideration. Whereupon Mr. J. P. Kennedy submitted the following preamble and resolutions, with some pertinent and explanatory remarks. The question being taken on each resolution, they were severally adopted.

Whereas, a numerous and respectable meeting of the citizens of Frederick county, was held at the court house in Frederick, on the 31st day of October last, to take into consideration "the best means of promoting the Internal Improvement of Maryland," when the following, among other resolutions, were unanimously adopted: "*Resolved*, That the Internal Improvement of the state of Maryland, both as an obligation due to herself, and to the Union, of which she is a member, merits and should receive the deliberate consideration and cordial support of all her citizens." "*Resolved*, That with a view to unite the various local interests for a system of internal improvement, it is expedient that a public meeting be held in the city of Baltimore, on the second Wednesday of December next, of seven delegates from each county, and from the cities of Baltimore and Annapolis, to be appointed by the citizens of those counties and cities, for the purpose of devising and submitting to the Legislature a plan for effecting a general system of internal improvement:"

And whereas, the citizens of Baltimore are deeply interested, in common with those of every other section of Maryland, in the promotion of such measures as may have a tendency to develop the resources of the state, and to place her in that elevated station among her sister states to which her position in the Union, and her many natural advantages entitle her—

And whereas, the just views of the citizens of the highly respectable county of Frederick, as contained in the preceding resolutions, appear well calculated to harmonize the different local interests of the citizens of this state, and to concentrate the public mind upon the best system of accomplishing objects which all concur in believing it both our duty and our interest to promote: Therefore,

Resolved, That seven Delegates be appointed by the chairman of this meeting to meet such Delegates as have been, or may hereafter be, appointed by the different counties of this state and the city of Annapolis, on the second Wednesday of December next, in the city of Baltimore, for the purposes aforesaid; and in case of any vacancy occurring in the representation to be by him appointed, the remaining delegates shall have power to fill such vacancy

Resolved, That our fellow citizens of the several counties of this state, and of the city of Annapolis, be, and they are hereby earnestly invited to adopt similar measures without delay, in regard to the proposed convention.

Resolved, That the Mayor of the city of Baltimore be respectfully requested to provide suitable apartments, for the accommodation of the said convention.

In pursuance of the power vested in him by the above resolution, the following gentlemen have been appointed by the chairman as delegates to represent the city of Baltimore in the convention to be held as above stated:

Col. J. E. HOWARD,
R. B. TANEY,
THOMAS ELLICOTT,
ISAAC M'KIM,
WILLIAM LORMAN,
GEORGE HOFFMAN,
J. P. KENNEDY.

Test, S. SMITH, *Chairman.*
J. S. Skinner, *Secretary.*

Answer to Inquiries on the Colic.

(*See American Farmer, vol. 7, p. 263.*)

To the inquiries of a correspondent on the subject of simple and efficacious remedies, in cases of violent colic, the following answer has been promptly communicated by another correspondent:

A correspondent in your last paper, inquires for the "best and most expeditious cure for the colic." I have repeatedly tried a simple remedy, which is almost instantaneous in its effects in common cases. It is about half a gill of Holland gin, a small portion of ginger, and a small quantity of hot water, taken internally

I have a servant, who is frequently attacked with this painful disorder, and who uses the gin and hot water without the ginger. He was attacked yesterday morning, so violently, that the perspiration rolled from him as if he had been at the severest exercise, in the warmest weather. He took a small quantity of the gin and hot water, and was perfectly relieved in four or five minutes.

While upon this subject, it may be well to mention a remedy for the above disorder, in horses, which has been tried with success in this neighbourhood. Take a piece of chalk, the size of a walnut, pound it fine, and put it into a quart bottle filled with the strongest cider vinegar; shake the ingredients, and immediately drench the animal therewith. It will act as a purgative in the course of a few minutes. Yours, respectfully, J. M. K.

Belleair, Md. 8th Nov. 1825.

P. S. I have read, with pleasure, the able "prize essay" of Thomas P Stabler on the ox. Will some of your New England correspondents be good enough to furnish a drawing and description of an ox yoke, entered by John Mears, of Dorchester, county of Norfolk, at the meeting of the Massachusetts Agricultural Society in 1824—and whether it be esteemed as a valuable improvement? If it should not be approved—the most approved one in that section, where the value, and best mode of treatment of that serviceable animal appears to be so well understood.

[Will G. H., Esq please consider the above as addressed to him?]

Marketing.—Butter, lb. 25 to 31 cts.—Chickens, per doz. $1.37½ to 1.50—Geese, 40 to 62½—Turkies, 75 to $1.25—Ducks, pair, 50 to 62—Eggs, doz. 25 cts.—Beef, prime pieces, lb. 8 cts.—Veal, 10 cts.—Lamb, 5 to 6 cts.—Pork, clb. $5—Irish Potatoes, per bush. 75 cts. to $1—Sweet Potatoes, 75 cts.—Turnips, 50 cts.

Tobacco.—Amount of inspections in the state warehouses, during the last week—213 hhds.

CONTENTS OF THIS NUMBER.

Memoir on the Culture of Hops, by M. Foderé, translated from the Bulletin des Sciences—Reports of the Brighton Cattle Show, concluded—Lewis Layssard's Patent Cotton Press, with a cut—On Feeding Hogs with Cotton Seed—Dorchester County Cattle Show—Importation of Long-woolled Sheep—General operations of Cookery, Broiling and Frying—On the Length of Gun-barrels—Internal Improvement of Maryland, proceedings at a public meeting in Baltimore—Answer to Inquiries on the Colic, with a recipe for curing the colic in Horses—Prices of Marketing—Prices Current.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	WHOLESALE. to	RETAIL. from	RETAIL. to
BEEF, Baltimore Prime,	bbl.	9 00			
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	33	34		
COFFEE, W.I. Green, .	—	18½	20	22	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	18	20		
Georgia Upland, . . .	—	15	16		
COTTON YARN, No. 10,	—	40			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33	34	37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	3 50	
Shad, trimmed,	—	6			
FLAXSEED, Rough, . .	bush	1	1 12		
FLOUR, Superfine, city,	bbl.	5 00	5 50	6 00	6 50
Extra . . . . do.	—	5 25			
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	53	57		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler, ...	—	85	95		
do. Red, ...	—	85	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	55	60		
Barley, ...	—	90	95		
Clover Seed, Red . .	—	5 00		6 00	
Ruta Baga Seed, . . .	—	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 50			
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	32	35		
Peas, Black Eyed, . .	—	1 00		1 50	
Beans, White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	200			
HOPS, ...	lb.	28	30		
HOGS' LARD, ...	—	10	11	12	
LEATHER, Soal, best,	—	27	28		
MOLASSES, W. India,	gal.	37	40		50
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7	8	9	
NAVAL STORES, Tar,	bbl.	1 87½			
Pitch, ...	—	2	2 25		
Turpentine, Soft, . .	—	2			
OIL, Whale, common, .	gal.	30	32		
Linseed, ...	—	85	90		
PORK Baltimore Mess,	bbl	14 50		15 50	
do. Prime, . . .	—	10 50	11 00	12 00	
PLASTER, cargo price,	ton.	5 37½			
RICE fresh, ...	c.lb.	3 00	3 50	5	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	7	8	9	10
WHISKEY, 1st proof, .	gal.	27	28	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	34	36	50	
SUGARS, Havana White,	c.lb.	13 50		15 00	16 00
do. Brown, . .	—	11 00			
Louisiana, ...	—	10 00	11 00	11 50	12 50
Loaf, ...	lb.	19	22	20	22
Lump, ...	—	16	18	19	
SPICES, Cloves, ...	—	80	85	1 00	
Ginger, Ground, . . .	—	7		10	
Pepper, ...	—	18	18½	25	
SALT, St. Ubes, ...	bush	42	45		
Ground Alum, . . .	—	50		62	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 25		
Lisbon, ...	—	1 20	1 25	1 50	1 75
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled,	—	33	35		

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AGRICULTURE.

ON CORN AND COB MEAL FOR FEEDING CATTLE, &c.

Extract of a letter from the Rev. H. C. Perley, of New Rowley, Mass., to the Editor of the New England Farmer:

There have been, of late years, two mills erected in this quarter of the country, to grind cobs and corn together, one in Danvers, and another in Andover, by I. Osgood, Esq., a very respectable gentleman and farmer. I think, if people could be favoured by some lucid information on the benefit of cob-meal, they would be brought into the general use of this discovery. Though there may be no honour in the discovery, I think there is much benefit to be derived to farmers from a free use of the cob. My object now, is to give you some account of the time and manner of the discovery by me; and to ascertain whether there was any use made of the Indian cob, by grinding, previous to the time I shall mention; and if there was, by whom and when the discovery was made.

In the winter of 1807-8, my corn threshing machine became out of repair, so as to admit pieces of corn through the rack of ½, ¾, and some of an inch long, which I had not time to separate from the shelled corn. I sent all to the mill together, and found the meal came home as fine to appearance as when the corn had no cob among it. When I found this to be the case, I designedly sent the grist to mill with an increased quantity of the cob among the corn; until I questioned the boy to know if the miller made any observations on my not cleaning my corn. His answer was, yes; Mr. Cross (the miller,) said, if Mr Perley was too lazy to clean his corn, he would not do it for him. After this, I visited the miller, and informed him of my design and agreed with him to grind my cobs, after I had pounded them sufficiently fine to get through his mill with the corn, and make decent meal—which attended to, and had cobs and corn ground together; and I put but about one peck of corn to a bushel of cobs. Meal, made of this composition, I scalded, and made about as thick as common hasty pudding; or mixed about one peck of the meal with three pecks of boiled potatoes, thickened to the consistency of pudding. With this kind of food, and what wash was made in the family, I constantly fed my swine: there were none in the neighbourhood grew so fast, or were fit to kill so soon in the autumn. The neighbours were surprised that my hogs looked so white and grew so well, being fed, as they were, with cob-meal, potatoes, and the wash of four cows. Some ridiculed the notion—others disputed and disbelieved the account; but finally all were obliged to believe the fact, though loth to try the experiment. They inquired of my labouring man, who worked on the farm that and the following year, and prepared the cobs for the mill, who is now a very respectable mechanic and farmer in Methuen, by the name of Wm. Parker.

The account of this discovery I spread round and among my friends in Rowley and Boxford, and and even sent it to the eastward, to the county of Cumberland; and this year I live on a farm in New Rowley, where I am using the same discovery and process of the meal, and can show better swine than any of my neighbours can produce of the same age: if people will not believe, they must come and see for themselves.

I have also made further discovery of the use of cob-meal for other purposes besdes feeding swine and cattle.

I had one batch of coarse brown bread, made of it, ground about half and half; sifted as usual, and the application of the usual quantity of rye meal. The bread was as high coloured, as light, as sweet and as moist as that made of pure Indian and rye meal; though I think it will dry rather sooner. Peter Marston, Esq, ate of the bread before he was informed of the composition; and afterwards declared he had no mistrust, it was made any other than the usual way.

By the Editor.—We are much indebted to Mr. Perley for the foregoing, and have no doubt but the article will prove beneficial to the public. Should any of our readers be able to furnish the information he requests, viz: whether there was any use made of the Indian cob by grinding previous to the time he has mentioned, we should be happy to receive and publish it. In the mean time we will contribute our mite, which, though not original, may be useful to some whose attention may not have been directed to the subject of the present inquiry.*

The first notice we recollect to have seen of cob meal was published in the Massachusetts Agricultural Repository for January, 1823, and republished in the New England Farmer, vol. 1, p. 228. It was contained in a communication by Mr. Asa Rice, jr. of Shrewsbury. In that paper he observes as follows: "The kind of meal I have used for seven years past, almost exclusively for provender, is corn and cobs cracked and ground together, which is the best provender I have ever made use of for fattening cattle. The reason I consider the cob useful is, it swells in the creature and keeps him in good order; in no one instance since I have fed with this meal, have my cattle been out of order by being cloyed, or scouring; they are at all times regular; but when I formerly fed with clear Indian, or oats and Indian, it was not unfrequent that their bowels would get out of order, and I have had considerable difficulty in regulating them again; they lose two or three days, sometimes a week. When this kind of provender was first introduced in this vicinity it had its opposition, like almost all new things. The second year, if I mistake not, which I made use of it I thought I would try an experiment as follows, by feeding one ox with corn and oats ground, the other with corn and cobs, having a yoke of oxen so even matched that no one who viewed the cattle appeared satisfied which was best; accordingly I fed them as above. The cob is computed to make a little more than one third, therefore I mixed the other with one third oats, which was my former mode. I gave each ox an equal quantity at a time, except that the one which had corn and oats, some days became dainty, and would not eat his allowance, while the other kept a regular course The allowance for both was a little over three pecks per day. When I took the cattle to market, Mr. A. White bought them; they weighed about 28 hundred and an half. The one fed on corn and oats had 162 pounds of tallow, and weighed about half an hundred more. The one fed on corn and cobs had 163 pounds of tallow, and Mr. White pronounced his beef half a dollar on the hundred better than that of the other, mostly on account of the *colour of the beef*," &c. Mr. Rice then goes on to give further statements, showing the efficacy of "cob and corn meal," which it is not necessary to repeat, as they may be found in the publications mentioned at the commencement of this extract. Our readers will also recollect Mr. Lowell's observations on this subject, in his report at the Brighton cattle show, which may be found p. 110 of the current volume of the New England Farmer. [See American Farmer, p. 268, current volume.]

The third volume of the Memoirs of the Philadelphia Society for Promoting Agriculture, contains the following article:

On the utility of grinding Maize (Indian corn,) in the cob, as food for cattle, with a description of a Mill for the purpose, by James Mease, M. D.

The practice of grinding Indian corn in the cob, to powder, for the purpose of horse-feed, is now common with our German farming fellow-citizens Those industrious men are ever attentive to the health and general welfare of their farm stock, and readily adopt any measure calculated to promote either object, and as they are convinced of the nourishing qualities of the cob, and the economy of the practice of using it as an article of food, they have encouraged the general erection of the necessary apparatus, in the flour mills in their different settlements.

The first apparatus used for the purpose of grinding corn in the cob, was a screw which was originally invented by Oliver Evans, of Philadelphia, and now in general use to break gypsum. Mr. Evans first reduced it to practice in the year 1790; but no measures having been taken to give publicity to it, the knowledge of it was diffused very gradually through the country; and it even appears that private offers for the gratuitous use of it were ineffectual (until after some years,) in causing a trial of what is now deemed an economical practice of the first consequence.

It was not until the year 1803, that I heard of the practice having been adopted in Lancaster county, and in 1804 I had great pleasure in seeing it in operation, in a mill on the Perkiomen creek, in Montgomery county, Pennsylvania I was so fully persuaded of the utility of the practice, that I wished to profit by it, and endeavoured to persuade a miller in Delaware county, near to where I had a farming interest, to erect one, but without avail. His scruples arose from an apprehension of an insinuation on the part of some people, that he would mix the meal of the corn and cob with his wheat flour; and he well knew that the mere suggestion of such a practice might prove injurious to his reputation.

Indian corn is, of itself, too nourishing, and too heating as a constant article of diet for horses, and if fed alone, a sufficient quantity cannot be given to them to produce the stimulus of distention, (which is as necessary for a working horse, or even to man, as nourishment,) without great expense, and at the same time endangering the health of the animal. Corn meal is therefore mixed with a portion of cut straw, and coarsely ground rye, or shorts, and in this state constitutes the daily food of that fine body of draught horses that do so much credit to our draymen and carters of Philadelphia, and the industrious farmers of the state at large.

The powder of the corn cobs, however, does not act entirely by distention; it also contains much nutriment, and I have heard of a poor woman in Maryland who prepared, during the winter, a very grateful mess for her cow, by boiling the bruised cobs with which she was furnished by her wealthy neighbours, with this liquor, mixed with what other vegetable matters she could procure, and a few corn blades, she supported her cow well through the winter and spring, until the return of grass.

The screw of Mr. Evans' invention is set to revolve over a grate, fixed in the bottom of a hopper, strongly made, and plated inside with iron. The corn in cob is thrown into the hopper, and taken hold of by the screw, and as fast as they are broken, they fall through the grate, and are guided by a sloping spout into millstones, or into an elevator, to be raised to the millstone hopper. But it is improper to use the same apparatus for both plaster and corn, on account of the impossibility of cleaning it sufficiently on an emergency, when wanted to grind corn, from the dust of the gypsum, which of course would mix with the corn flour and cause injurious concretions in the intestines of the horse.

[*New England Farmer.*

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* For experiments to ascertain the comparative value of corn ground with and without the cob, see communication from Peter Minor, Esq., secretary of the Albemarle Va.) Agricultural Society, in American Farmer, vol. 1, p. 324. Ed. Am. Far

PROCEEDINGS OF AGRICULTURAL SOCIETIES.

Governor Lincoln's Introductory Address.

Delivered on the past Anniversary of the Worcester County (Mass.) Cattle Show, &c.

Gentlemen of the Worcester Agricultural Society:

The honour conferred upon me by a re-election to the Presidency of this institution, affords me a gratifying opportunity of offering to you my congratulations upon the recurrence of this anniversary, and upon the favourable circumstances under which we are now assembled. The present is the sixth public Exhibition of the fruits and products of the soil, of the industry, ingenuity, and enterprise of the citizens of the county of Worcester, under the auspices of this society; and observation and comparison will prove that it has no less highly advanced in character from the beginning, than it has risen in the scale of numerical designation. The interest in our show, which at the first was so favourably manifested at home, has not only increased among our own population, but has extended itself to other parts of the Commonwealth, and to the neighbouring states, until we witness, as on this day, men of taste and science, the patrons of the arts and the friends of agriculture from distant places, honouring the occasion with their presence, and evincing their regard for our exertions, by the labour of a personal investigation into their results. The people of the county of Worcester, should be animated by their success and their high reputation, by the extent of their territory and the greatness of their numbers, by their locality in relation to other parts of the state, and above all by the unity of their interests, to cherish this institution, so appropriate to their condition, and to their pursuits. The *Ploughing Match* should be the favourite sport of the farmer, and a *Cattle Show* the chosen place for his pastime. The manufacturer should be convinced that his interest will be advanced no less than his laudable pride gratified by a competition in this public exhibition of the products of ingenuity, of machinery, and of workshops. The character of his fabrics will be thus extended, the place of supply made known to the consumer, and a reputation acquired for himself and his goods with those who are here assembled from various and distant places, and who otherwise would long remain ignorant alike of the quality of the one, and the name of the other.

It would neither comport with the arrangements of the day, or the delicacy due to the situation of the gentleman who is appointed to address you, that I should pre-occupy your attention with further considerations of a general nature, which press upon the occasion. It will be proper, however, and may be expected from me, that I should report to you very briefly the progress of the concerns of the Society since the last anniversary, and state to you the prospects of the present morning. By a certificate furnished me by the treasurer, it appears, that our numbers have increased to a total of 712. And that the permanent fund amounts to $4,400, the principal part of which is entirely well secured, and constantly accumulating by accruing interest, and the admission of new members. An obvious spirit of improvement has marked the influence of the institution, and public favour has followed its public displays with a flattering distinction. To ascertain in the most satisfactory manner the general state of husbandry, and the extent and improvement of manufactures, the Trustees, early in the season, divided the towns of the county into eight districts, and appointed a committee in each for the survey and examination of farms, and of manufacturing establishments. Some of these committees, by their chairman, have returned able and highly interesting reports—and from others we are yet expecting to hear. Some of the districts, it is to be regretted, either did not interest themselves in the object, or were ignorant of the manner in which the attention of the committees was to be engaged. The reports which have been received, too long for communication at this time, will be addressed to your consideration through the medium of the public papers, and will richly reward your care in the perusal

The promise given to the society the last year, of the use of a hall accommodated to a fit exhibition of manufactures, has been fulfilled, and through the liberal spirit of the inhabitants of this town, justly appreciating our claims upon public munificence, we are this day, in the possession of spacious rooms for the preservation and favourable display of every description of fabric presented for examination.

The books of the recording secretary show the crowded state of our numerous cattle pens, and prove that the pride of the agriculturists of this rich and famed section of the country will be no less engaged to maintain and justify a high reputation, than it has been heretofore gratified by acquiring it. The Trustees particularly invite a careful and discriminating examination of the neat stock. An earnest controversy upon the properties and relative value of the native and of the imported breeds, has recently occupied the time and employed the talents of eminently accomplished and scientific men, and will attach to the results of this day's inquiry unusual interest. From theory and speculation, the appeal may now be made to practical observation, and the certainty of fact. No personal or angry feelings will here mingle in the discussion, but the single motive will be to examine all, to compare each with the other, and to prefer the best.

The presence of so many members of our society we greet with pleasure. Other societies who have honoured us by deputations on this occasion, we hold in respectful estimation. Strangers who attend our exhibition we bid cordially welcome. May the satisfaction of all spectators in our Show, equal our gratification in the favour of their notice.

[*Ind. C*[illegible]

[From the New England Farmer.]

BRIGHTON CATTLE SHOW.

The following Report was not received last week until after our paper was put to press. It should have followed No. 3.

The Committee on the Ploughing Match, [with one yoke of oxen,] consisting of E. Hersey Derby, chairman, Colonel Josiah Titcomb, and Ebenezer Heath, esq.—Report, the conditions of the match were, that the lots should be one-eighth of an acre each, and the ploughman arranged according to the date of their entry.

The ploughing was to be five inches deep, and the furrow slice to be not more than ten inches wide.

The excellency of the work, and economy of labour, and not the rapidity, was to be the criterion in awarding the premium, regard being also had to the state in which the cattle came from their work, and to their general appearance.

Forty minutes were allowed for the performance of the task.

There were nine competitors started, all with a driver except two.

The first lot was finished in twenty-four minutes and the last in thirty-five minutes.

It gave the Committee great pleasure to observe the excellence of the teams, and the good order and superior management of the ploughmen and drivers.

The ploughs were all good, two of them cast iron, the others of wood.

With great satisfaction the Committee state, that, considering the unsuitableness of the ground for an exhibition of this kind, there being a number of large rocks in the lots, and the same being badly swarded, they have never, at any of our Shows, seen so much good work. All of it being so excellent they have found it extremely difficult to decide to whom they should award the premiums.

After a great deal of consultation they have decided to award to Abiel H. Wheeler, of Concord, the first premium of fifteen dollars; to the ploughman, eight dollars, and to the driver, four dollars.

To Perley Tapley, of Danvers, the second premium of ten dollars, to the same as ploughman, five dollars, and to the same as driver, having no other driver, three dollars.

To Seth Hastings, of Mendon, the third premium of six dollars, to the ploughman, three dollars, to the same as driver, having no other driver, two dollars.

E. HERSY DERBY,
JOSIAH TITCOMB,
EBENEZER HEATH. } *Committee.*

Brighton, 20th Oct. 1825.

HARTFORD CATTLE SHOW.

Hartford, (Conn.) October 11, 1825.

The annual Cattle Show and Exhibition of Domestic Manufactures, of the Hartford County Agricultural Society, was holden at the State-house on the 5th and 6th days of October. This was the seventh anniversary of the Society, a period of time, without doubt, sufficient to test the propriety, on the principle of loss and gain, of continuing these shows; and it is believed that no one who would compare the exhibition of neat stock this year, with the first and second exhibitions, could have the least hesitation in declaring that the society has been of immense advantage to the county. Through the influence of the society, a new variety of kine have been widely introduced among us, differing in size, colour and beauty, from the race formerly bred in the county, and in all these respects much superior. The introduction of the best breeds of neat cattle into an agricultural district, has always been considered, by farmers, as a matter of the greatest consequence. The manufacture of household goods may vary, from year to year, according to the circumstances or caprices of the inhabitants; but when once an improved kind of live stock is introduced, the improvement may be considered as permanent, and not liable to change, at least for a series of years. The show of cattle this year was in every respect superior to any of our former exhibitions.—The competition in bulls, was particularly noticed. Most of them were of the Devonshire breed, and among the number were specimens, which for size and beauty, exceeded any we had seen. The steers and heifers of the same breed, were also much superior to those formerly presented. A great proportion of these fine animals originated from the imported stock owned and kept by Mr. Hurlbut, of Winchester. Some fine stock of the Ayrshire and Holderness breeds, were also exhibited. For the names of the successful competitors in stock, we must refer the reader to the list of premiums awarded by the committee.

The report on Farms, by Mr. Ellsworth, will be read with much interest. The number entered for premiums, and viewed by the committee, amounts to nine. This shows the increasing interest the farmers take in this branch of agriculture, as the greatest number heretofore entered has been seven.

We regret that it is not in our power to praise the exhibition at the State house. The number of articles presented for premiums there, was less than formerly. This may be accounted for as arising, in some degree from the very wet weather of Tuesday and Tuesday night preceding the show.

Among the articles presented, for which no premiums could be allowed, are noticed the model of a *mowing machine,* sent by the inventors, Messrs. Ebenezer and John Prentiss, of New-London. This machine indicates much ingenuity, and is said to operate to the satisfaction of those who have seen it perform.

The Chaises presented from the factory of Messrs. G. & H. Frances, of this city, were very elegant specimens of form, workmanship and finish.

A sample of Cheese was sent as a curiosity by the Rev. Mr. Robbins, made 35 years ago.

[*Conn. Courant.*

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COMMUNICATED.

Hartford County, (*Conn.*) *Nov.* 11, 1825.

Our Cattle Show was, as usual, attended by some good judges of stock, some lookers on, and some puffers. There were exhibited for premiums, a few Short Horns, many native and Devon Cattle.

For fat Oxen, the first premium was awarded to A. Mills, Esq, of East Windsor, for his five years old steer, a descendant of Mr. Wolcott's bull, his dam by the same bull that sired the famous Connecticut ox. The premiums for working oxen, were all awarded to native cattle. For three years old steers, the first premium was awarded to Mr. Bartlett, of East Windsor, for steers of native breed. For two years old steers, half blood Devons received the first premium. For milch cows, the first premium was awarded for a three years old half blood Denton cow. For two years old heifers, the first premium was awarded to Mr. Joseph Morgan, of Hartford, for a half blood short horn, by Comet, in competition with a host of Devons. For two years old heifers, the second premium was given for a quarter blood Devon; and the third premium for a half blood Devon and the most promising animal of the blood, I have ever seen. For yearling heifers, the first premium was given to a quarter blood Devon, in competition with many half blood Devons. Mr. E. Wolcott, exhibited, (not for premium,) the fine bull imported from Ayrshire, Scotland, by H. Hills. In 1823, he received the Society's first premium for bulls—he shows many of the fine points of the improved Durham short horns. Mr. Hills, exhibited two heifers of the same breed, they were fine pointed animals, but their colour was *very* bad; for they were so unfortunate in their birth, that not quite half of their hair was of the *fine mahogany red*. It was white, and white is by many disliked.

I am respectfully, your ob'dt. servant, and the servant of all at cattle shows,

A LOOKER ON.

FREDERICKSBURG AGRICULTURAL SOCIETY.

The annual meeting of the Fredericksburg Agricultural Society was held at the Indian Queen tavern on Wednesday, the 9th of November, and continued by adjournment on the 10th.

The following gentlemen were elected officers for the ensuing year:

James M. Garnett, *President.*
John Taliaferro, *Vice President.*
William F. Gray, *Secretary.*
John Chew, *Assistant Secretary.*
Robert S. Chew, *Treasurer.*

Committee of Correspondence.—John Taliaferro, Robert Lewis, John S. Wellford, Wm. Bernard, Wm. F. Gray.

Among the resolutions passed, were the following:

Resolved, That all new members, admitted at the semi-annual meetings in May, shall be charged with their annual contributions at the annual meeting in November, following such admission.

Resolved, That a premium of $20 be given to the grower of the largest quantity of wheat, on not less than ten contiguous acres of land. And that a premium of $20 be given to the grower of the largest quantity of Indian corn, on not less than ten contiguous acres of land.

Resolved, That the Corresponding Committee be instructed to correspond with the other agricultural societies in this section of the state; and, by arrangement with them, determine the times of holding the next *shows*, so that they shall not conflict with each other in point of time; and that they cause due notice to be given of the time of holding our next *show*, when so determined.

Resolved, That any person who shall hereafter wish to become a member of this Society, must be present to be introduced in person, when elected; or he must express such wish by note or letter to some member of the society; which shall be preserved on file.

Resolved, That ———— be a committee for determining what kind of stock or manufactures are most worthy the encouragement of this society; and that they be empowered and required to prepare a list of premiums for the same, and cause it to be published, with the least possible delay, for the information of all concerned.

Resolved, That to insure order, and more effectually promote the design of this society, the said committee be required to prepare a set of rules for the regulation of the next *show*—which shall be reported to the spring meeting for its approbation.

Resolved, That all the Committees necessary for carrying into effect the said rules, be appointed at the spring meeting; and the names of the said committees published, together with the other arrangements of the Society.

That part of the 16th article of the constitution, which declares that "any member who shall be found two years in arrears, shall be considered as having withdrawn from the Society," was repealed and the following adopted:

Resolved, That no member of this Society shall be permitted to withdraw from the same until all his dues shall have been paid up.

JAMES M. GARNETT, *President.*
Wm. F. Gray, *Secretary.*

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The following remarks upon the late Agricultural Show have been furnished by a member of the society. As they agree entirely with our own observations, as far as they extended, we give them in his own words:

The Show.

Notwithstanding the many unfavourable circumstances which preceded and attended the late Agricultural Exhibition, it has been such as to strengthen our confidence in the beneficial influence of the association, and to stimulate us to still further efforts in the good cause. The low state of our funds during the past year, rendered it for a time a matter of anxious doubt with the society whether they would venture to propose another show or not. This caused the list of premiums which was finally resolved on, to be offered too late to create the competition which an earlier publication would have insured. The races, and several agricultural exhibitions in neighbouring counties, happening about the same period—one of them, (that of the Albemarle Society at Charlottesville,) on the same week—had the effect of drawing off much of the public attention from the Fredericksburg Exhibition; in addition to all which the elements were adverse. The weather, which had for some time been delightful Indian summer, suddenly assumed a wintry aspect, and the first day was cold and wet. This alone prevented the presence of many who designed being there; the exhibition, however, was well attended, not only by our townsmen, but by many of the yeomanry of the adjoining counties of Stafford, King George, Westmoreland, Essex, Caroline, Grange, Louisa, Culpepper, and Fauquier And one ot the successful competitions was from beyond the Blue Ridge. The exhibition of Cattle and Horses was upon the whole *good*—in some respects *better* than on former occasions.

On the second day the weather was more auspicious, and though still cold, was clear. The exhibition of Domestic Manufactures, always the most interesting part of the show, because it is most intimately connected with our individual and national independence, was on this occasion expected by all classes of our community with anticipated delight. But here again the success of the exhibition, and the pleasure of the anxious throng that surrounded the place where the specimens of the industry and ingenuity of our farmers' wives and daughters *ought to have been shown*, was completely marred by the bad arrangements, or rather *no arrangements*, that had been made for the purpose. The number of the specimens, and the superior beauty of some of those we were fortunate enough to inspect, warrant the belief that had they been properly displayed, this exhibition would not have fallen short of the former ones. But to the great majority of those who went to enjoy the scene, it was as a sealed book. It was with difficulty that the judges, with the assistance of the constables to boot, could obtain such an inspection of the goods as was necessary to a correct judgment, owing to the unregulated pressure of a crowd of persons towards one spot. However, it will be seen by the proceedings of the society, that they have *resolved* to make better arrangements in future. Measures are also to be taken to bring into active operation a large portion of the funds of the society, which to the great impediment of its operations, now lie in the pockets of certain members in the shape of *arrearages*. It is to be hoped that this part of the society's future operations will be entirely successful, for on that depends the success of all the rest

Fifty six new members have been admitted into the society since the last annual meeting, and in them the society has made a considerable acquisition of wealth and intelligence. The withdrawals, in the mean time, have been few. The friends of the association need not fear but that it will go on and prosper. And we may reasonably indulge the hope that its benefits will be greatly increased as the sphere of its operations are enlarged.

[*Virginia Herald.*

AGRICULTURAL SOCIETY OF THE VALLEY.

The third annual exhibition of the Agricultural Society of the Valley, was held in Winchester, on Thursday, Friday, and Saturday of last week, and was numerously attended by the farmers of this and the adjoining counties. For a regular account of the proceedings, we refer the reader to the subjoined minutes of the secretary, who, we are pleased to see, has not confined himself to a formal report, but has filled up the chasms usual at such times with a connected detail of all that was done on this interesting occasion.

It was somewhat in disparagement of this exhibition that the weather was so unfavourable. The morning of Thursday was drizzly, and in the afternoon a violent shower of rain drove every thing before it. On Friday the weather was cold, accompanied by a strong north-wester; and it was not until Saturday that Nature seemed to regard the closing scene with complacency.

Notwithstanding these disadvantages, the streets were thronged with citizens and strangers—the church was crowded to overflowing—the cattle field presented a living mass of human beings—and the ploughing-match, the day following, was much impeded by the concourse of spectators.

Compared with the previous exhibitions, there was nothing in this to depress the hopes of the friends of the society, but much to encourage them. The animals made a fine display, and were thought to be superior to those of last year. In the manufactures there was an evident improvement, especially in the fabrics wrought by the fair hands of the daughters of the valley. To them we would say, Persevere in the good work, let not the charms of the toilet banish the remembrance of the distaff, nor the fascinations of the parlour drown the music of the spinning wheel. Exercise will give a brighter glow to the cheeks than the cosmetics of the refiner, and a knowledge of the true value of our hands will afford a better security against the future, than any resource which the distempered imaginations of fashionable life can furnish. Elegance of person and refinement of manners are amiable in their place, and are not inconsistent with those really useful accomplishments which prepare the sex for good wives and prudent matrons. "The heart of her husband doth safely trust in her, so that he shall have no need of spoil. She will do him good and not evil all the days of her life. She seeketh wool and flax, and worketh willingly with her hands. She layeth her hands to the spindle, and her hands hold the distaff. Her husband is known in the gates, when he sitteth among the elders of the land."

Mr. Page's oration is such a one as might be expected from an intelligent gentleman and practical farmer. It does honour to his head and heart. Although regarded by some as rather *ultra* in its sentiments, it was well received by the audience, and will be admired by the reader.

It gives us pleasure to add that the popularity of the society was never more manifest. This may be seen from the number of highly respectable gentlemen who desired to be added as members during the fair. Since its commencement it has been gradually increasing in size and strength, until the blade has become the full corn in the ear. An application will be made to the next legislature for a charter of incorporation. Should it be granted—and we see no reason why it should not—it will add a new impulse to our exertions, and the next list of premiums will equal in amount that of any other agricultural society in America.

We are here compelled to close this short notice, by reason of the great length of the proceedings which follow. In doing so we must be permitted to add our acknowledgments for the promises of support given to the agricultural paper we propose publishing. We are enabled to decide that it will go on as soon as paper of a fine quality can be made for the purpose.

PROCEEDINGS.

At a meeting of the Agricultural Society of the Valley, held in the Court House in Winchester, October 27, 1825; William B. Page, president, in the chair.

The president announced that the society had met for the purpose of holding its annual exhibition. He was gratified to observe so numerous an attendance of the members, and felt assured that unanimity and good feeling would prevail throughout this interesting occasion. As a preparatory step in the proceedings, he would name the marshals and committees; after which the society would proceed in the duties of the day.

Marshals.—Joseph H Sherrard, George W. Kiger, Ebin Milton, Alfred Parkins, Solomon R. Jackson. David W. Barton.

COMMITTEES.

On Crops.—Edward J. Smith, Thomas Nelson. Thomas Russell, Isaac Wood, Archibald Magill.

On Horned Cattle and Sheep.—Lewis Neill, John Gilkeson, Amos Lupton, John Peter, John S. Davison, John Hopkins, jun.

On Ploughs and Ploughing matches.—Robert Vance, Jacob Vanmetre, James Jones, Bushrod Taylor, Henry M. Brinker, Adam Kerns.

On Manufactures. John Yates, John M. Brome. Philip Smith, D. Hollingsworth, Samuel H. Davis. Joel Ward, Jun.

On Horses and Hogs.—Josua Lupton. James Ship, James Affleck, Richard W. Barton, Robert P. Page.

On Implements of Husbandry and Inventions of every description.—Henry S. Turner, John Alexander, James Ficklin, John R. Cooke, William H. Harris.

ALBEMARLE AGRICULTURAL SOCIETY.

Charlottesville, Va. Nov. 12, 1825.

On Tuesday and Wednesday last, the Agricultural Society of Albemarle, held their first Exhibition and Cattle Show, at the farm, the residence of Samuel O. Minor, near Charlottesville. It was attended by a large concourse of persons, and the competition for premiums in the various articles of ploughs, live stock and domestic manufactures, was animated and interesting. We were particularly pleased with the specimen of ploughs exhibited; and with the method by which the power necessary to move them was tested. Five ploughs were offered for the premium, each of which was subjected to this trial; by an instrument, (called an angular balance,) which was furnished by Stephen McCormick, Esq. of Fauquier county. A trial of speed was then made by the several ploughs, to ascertain the shortest time in which one-eighth of an acre of ground could be ploughed. The time varied from 15 to 18½ minutes; and the premium for the best plough was awarded to Mr. McCormick. The horses and colts produced, were of excellent quality, both for the saddle and harness, and encourage us to hope that the breed of this valuable animal is undergoing rapid improvement in Virginia. The number of cattle, sheep and hogs exhibited, were not very numerous, though some admirable specimens were among them.

Some fine articles of domestic manufacture were furnished; particularly a pair of blankets, by Coleby Cowherd, Esq. of Orange, and a straw bonnet, by Mrs. Emmeline Lewis. of Albemarle. The bonnet exhibited by Mrs. Lewis, surpassed all expectation, and excited universal admiration. The society expressed their satisfaction, in a very full meeting, by an unanimous resolution to double the premium to which the article by their rules was entitled.

James Barbour, Esq the present Secretary of War, who is the president of the society, was prevented from attending by official duty. It was much regretted that he could not comply with the invitation of the Society, to preside, on this interesting occasion. He had very politely enclosed an address, which was read to the society and a number of citizens, and received with great interest and attention. The thanks of the society were unanimously voted to Mr. Barbour, and three hundred copies of his address ordered to be printed in pamphlet form for their use.

CAPITAL IN HORSES AND SHEEP.

I have examined the "Comparative estimates of capital employed in rearing horses, cattle, and sheep in West Pennsylvania," published in the 7th volume, 50th number of the American Farmer; as I take deep interest in the subject, having vested some capital in the purchase of brood mares and merino sheep—and as I do not concur fully in opinion with the author of the statement, particularly in relation to horses, permit me to give you my view of the matter. There can be little profit, and there is less use, in rearing ordinary or low priced horses, for reasons so obvious that I deem it unnecessary to assign them.

We will suppose that a farmer shall commence with twelve thorough bred mares, well selected, from *three* to *four* years old I prefer that age, because if mares are put to breeding at an early age, they will breed the more certainly thereafter.

Twelve thorough bred mares will cost $200 each. $2400.

Keeping twelve mares one year, at $20 each, (which exceeds by $5 the charge exhibited in your correspondent's statement,)	240
With your correspondent, I will suppose that twelve mares will raise nine foals annually, and that it will cost $3 each to bring them through the 1st winter, making an aggregate of	27
2d year $10 each,	90
3d year 12 each,	108
4th year 20 each,	180
For the season of a thorough bred horse to each, $15,	180
	$825
Seven of the nine foals will average at four years old, $200,	$1400
Two of the nine will certainly bring from 3 to $400—say $350 each,	700
	$2100
From which deduct the expense of keeping, &c.	825
Profit,	$1275
The 2d, 3rd, 4th, 5th, 6th, 7th and 8th years will produce similar results, or an aggregate of	8925
Which with the product of the first year, amounts to	$10200
From which deduct the cost of keeping 12 mares 7 years, at $20 each,	1680
	$8520

The mares will now be 12 years old and upwards, and I will suppose that 6 of them are useless, and that the remaining 6 are worth, as breeding mares, $100 each. I own two breeding mares of the age of 12, and two that are 16 years old, either of which I would not sell for $200.

Six mares, value $100 each,	$ 600
Added to the $8520,	8520
	9120
From which deduct the cost of the mares with interest thereon for eight years,	3552
Leaves profit of	$5568

Or of $696 per annum, or say $600, leaving the $96 per annum, to meet casualties, which will leave $50 profit per annum on each brood mare, besides the advantage of feeding hay and grain on the farm, and the consequent accumulation of manure. C.

P. S. Relative to the "*Estimate on Sheep.*" I possess a flock of about 500 merino sheep; the expense of keeping them has been greater than that stated by your correspondent, and the profit resulting from them has certainly been less. But, perhaps I have erred in the management of my sheep. In a flock of 100 ewes, there will be 15 or 20 quite old sheep; for I presume that no man of any judgment would sell off all his young thrifty ewes, and reserve for his own use the old ewes. Taking this, and all probable casualties into consideration. it is fair to conclude, that the original flock of ewes will not exceed 90 at the expiration of one year.

The allowance of hay is not sufficient, in my opinion, full grown sheep require eight pounds of grass, each, per day, or an equivalent, which is two pounds of hay. In the northern counties of Pennsylvania, hay must be fed to sheep 150 days in each year. If I am correct in this, it follows that your correspondent's allowance of hay must be more than doubled.

Five hundred sheep will require the constant attention of one man during the summer months, I think—and of one man and two boys during the winter months. This exceeds in labour, your correspondent's allowance.

It is stated, that "the fleeces of the above (100 ewes,) if good, will average two dollars each." They must be superior if they do, as well in the quality, as the quantity of the wool produced. My flock did not average, this year, two and a quarter pounds of wool, washed well on the backs of the sheep, and divested of tags; and you may suppose the quality thereof to be excellent, when I inform you that it averaged 80 cents per pound.

The product in lambs, stated by your correspondent, is greater than I have been able to accomplish; many of my lambs have died before they have reached the age of one year; and I have constantly lost some the latter part of the winter and early in the spring, when they are about one year old; living over one year, they generally do well; but I am satisfied that hitherto I have not raised to exceed a year old, more than fifty lambs from one hundred ewes, taking the average of my flock of ewes. As your correspondent has evidently been more fortunate than I have been with sheep, he will confer a great obligation if he will communicate his mode of managing them, particularly the ewes and lambs, and by stating at what period of the year his ewes drop their lambs.

The north western counties of Pennsylvania, are peculiarly well adapted for the rearing of horses and sheep, as the soil, generally, yields abundance of grass for pasturage and hay, the climate is good, and the country is somewhat rolling—I speak of Erie, Crawford, and Warren counties.

ON THE CULTURE OF WOOL.

Middlebury, Vermont, Oct. 18, 1825.

The prejudices which have heretofore prevailed to a very considerable extent, seem now to be completely vanquished, and the emulation which exists for the possession of the more improved breeds of this animal, is highly auspicious to the prosperity of the state. Those who possess flocks with an admixture of the merino from a half to full bloods, procure from forty to sixty or seventy cents per pound for their wool, while the price of the common fleece is only thirty-four cents. These profits of the improved breeds are further greatly enhanced by the superior weight of the fleece, which in ordinary flocks of half and three quarters blood, will average from three and a half to four pounds, while two and a half and three pounds, is a good yield for common sheep with the same feed and keeping. A further benefit is seen in the superiority of price of the fine fleeced animals. A merino ewe or buck is worth from ten to twelve dollars, and three-fourths to seven eighths blooded from three to six dollars; while from one dollar to one and a half and two dollars, is the price of native sheep. The preference of rearing sheep rather than cattle may be seen in the diminished labour, the ready profits, and the superior prices of sheep and wool, over beef, butter and cheese.

The profits of keeping merinoes may be greatly augmented by improving the staple, which can be easily done by judicious management, by selecting the finest fleeced ewes for breeders, and more especially by crossing the blood with the Saxony race. This family of sheep it is well known, derived their origin from a selection made from a Spanish flock, and introduced into Saxony about sixty years since, where they have been nourished with peculiar attention until the fineness of their fleeces far surpassed that of the parent stock. This circumstance decides what has often been doubted, that the texture of the fleece improves in a northern climate. It is asserted by a writer in the Baltimore Patriot, that the Saxony wool commands nearly double the price in Europe and America of the fine Spanish Leonesa.

But we are frequently asked whether the price of wool will not, by the present extraordinary competition, speedily be reduced, and whether he who devotes his capital exclusively to the production of wool, will not eventually be a loser. Of this, the agriculturist can judge perhaps much better than ourselves. We can merely state the facts that the duty on imported wool is now twenty-five per cent. ad valorem, and for some years to come is subject to an annual advance of five per cent.—and that woollen manufactories are multiplying probably somewhat in proportion to the increased cultivation of the raw material. Wool, like cotton, must always be an article which will command a fair price and a ready market, and the price will bear a considerable diminution before its production will be an unprofitable business for the grower. [*Nat. Stan.*

WOOL.

Dear Sir, *Philadelphia, Nov. 19, 1825.*

Subjoined you have an extract of a letter received from a gentleman now in Paris, who was requested to procure for me a few sheep, of the government flock at Rambouillet. It may be interesting to those of your subscribers who have turned their attention to the rearing of fine woolled sheep.

"Sales at Rambouillet.

"The rams and ewes found a great number of amateurs. The ewe No 25, was sold at 600 francs. No. 27, 400 francs;—the rest sold in the same proportion. The ram No. 18, which astonished the connoisseurs by the fineness and beauty of his form. brought 3,600 francs; ram No. 20, brought 2550 francs, No. 50, 2060 francs; No. 27, 1805 francs; No. 16, 1505, francs; No. 45, 1495 francs; No. 48, 102) ."

The sales of wool and sheep amounted to 71,000 francs—which was one-third more than the last year.
I.

PUBLIC SALE OF WOOL.

The sale of a large quantity of wool, by Messrs. Coolidge, Poor & Head, yesterday, went off with spirit, and at fair prices. The following is a note of the prices. Terms, under $1000, six months—$1000 to 2000, six and nine months—$2000 and over, six, nine and twelve months:

Electoral Saxony wool,	1 bale, lb.	$1 89
1st Prima Saxony wool,	6 bales	1 50
- -	1 bale	1 40
Mixed,	1 box	60
2d Prima Saxony,	6 bales	1 02¼
- -	6 -	96
- -	10 -	91
Secunda Saxony,	12 -	85
- -	10 -	78
Imperial Saxony,	2 -	1 82½
1st quality Saxony,		1 62½
Super Spanish,	10 bales	80
Saxony,	7 bales	50
Extra fine Saxony,	3 bales	1 07½
Fine -	4 bales	78
Fine -	8 bales	60
Merino, unwashed Ohio,	10 bales	41
- - -	10 bales	39
- - -	10 bales	38
- - -	10 bales	35
- - -	20 bales	34
Spanish wool, 4 R. 2 F.	6 bales	58
Mixt Saxony,		52½
Merino, flock of Mr. Ticknor,	1800 lbs.	74
- - -	2100	73
- - Mrs. Woodward,	2600	56
- - Mr. Gold,	1800	54
Merino, flock of Mr. Kinne,	2000 lbs.	59
- - Mr. I. Thorndike, jr.	1900	64
- - Mr. C. Benton,	1300	51
- - Mr. D. Whittemore, jr.	300	55
Tertia Saxony,	9 bales	65
Quarter,	4 bales	60
Middling mixt,	2 bales	58
-	2 bales	50
Common,	2 bales	51
Fine,	1 bale	61
Locks,	1 bale	42
Fine lambs' wool,	2 bales	53
Short mixt lambs' wool,	2 bales	56
Saxony,	4 bales	71
-	1 bale	66
-	8 bales	79
Saxony fleece.	6 bales	86
- -	7 bales	87
Spanish,	3 bales	56
-	6 bales	53
Full blood, flock of Mr. Huntington,	1200lbs.	53
- - Mr. S. Bass,	400	52
- S. B. C.	400	55
- flock of Mr. S. Jones,	500	55
- - Mr. W. Kinne,	500	62
- - Mr. J. Blethen,	400	56
Native, low grade,	500	34
Full blood, flock of Mr. S. Barker,	800	57
Unwashed,	1300	30
Full blood, flock of Mr. J. Gilchrist,	1200	58
- - Mr. S. Prentiss,	500	50
- - P. of L.	800	58
- -	1000	52
Washed, grade wool,	23 bales	40
Lambs' wool,	9 bales	42
Grade wool,	3 bales	37½
Coarse wool,	2 bales	23
Washed full blood,	2 bales	48
Unwashed full blood,	1 bale	30
Washed full blood,	1 bale	44
- -	1 bale	52½
High grade,	6 bales	27½
Super lambs' wool,	59 bales	50
- -	14 bales	49
Spinning -	50 bales	40
Lambs' wool,	15 bales	48
Clippings,	8 bales	6
Spinning wool, fresh water washed,	14 bales	42
First quality lambs' wool,	8 bales	50
Super Spanish lambs' -	8 bales	60
Full blood merino, extra fine. flock of R. Coit,	500 lbs.	1 14
Native and grade wool,	600	37½
Extra full blood,	900	60
Full blood,	800	62
-	700	62
Principally full blood,	1000	61
Native and grade,	600	37
Full blood, flock of S. & L. Hurlbut,	1200 lbs.	76
Grade wool,	300 lbs.	47
Mostly full blood,	1000	60
7-8 blood,	10 bales	51
3-4 blood,	10 bales	41

[*Boston paper.*

HORSE MILLS—INQUIRY.

Mr. Skinner,

Some months past we were interested by a correspondent of yours under the signature of "Amphicon," in relation to a horse-mill, the invention of Mr. Ellicott, which was supposed to be admirably adapted to plantation use, to supply good corn meal for the family and the labourers, as well as to crush corn for stock. Such a mill is the most desired machine that could be presented to the farmers if it will be effective, durable, and of moderate price, and would inevitably obtain rapid and numerous sales. They ought to be of different dimensions, some of one horse power and some of two, and of course of different prices.

By crushing corn I understand the breaking up the cob with the corn on it, and grinding it when thus broken into what is called cobmeal. This is a most important matter; and a durable machine, simple in structure, capable of being worked by one or two horses, moderate in price, that will effect this, and also grind from twenty-five to fifty bushels a day of good family bread meal, will deserve and no doubt receive a most extended patronage.

I desire to know through the medium of the American Farmer, if Mr. Ellicott's horse mill has turned out satisfactorily, and whether it is such a mill as I have described. I should also wish to know the price precisely of such a mill, and who can be procured to put them up. This information is desired by a great many, a portion of whom are at considerable distances from you.

A horse mill for these two purposes alone, viz. to grind family corn meal, and to break up corn and cob, and reduce that into cobmeal for stock, is wanted. It is not desired to grind wheat, or to saw, or to do any thing else.

The inquiry is not intended to be restricted to Mr. Ellicott's mill. If any other person has invented one of the kind described, that is thought better of, it would be very gratifying to learn the comparative merits of each, in all points, with the facility of operation, and the price.

A Talbot Farmer.

Nov. 14, 1825.

MR. SMITH'S COTTON PLANTER.

[Extract of a letter from a correspondent in South Carolina.]

Dear Sir, *Edisto Island, Nov.* 16, 1825.

A short time since I read in the 28th No. of your paper, an interesting communication from Mr. F. H. Smith, relative to his invention of a machine to save the tedious labour of planting cotton by hand. In consequence of my engagements at that time, the paper was laid by, and I have not since been able to find it, or Mr. Smith should have been furnished with the information he solicited. No such machine, so far as my knowledge extends, has ever been in operation in this state: and I am satisfied, from the description given, that it will be productive of great practical benefits. At any rate I feel disposed to test its efficacy. Twenty labourers can seldom plant more than fifteen acres of cotton a day; which are five acres less, than the work the "cotton planter" can perform in the same time. If Mr. Smith will do me the favour of forwarding to me, through you, a model of his invention, he will be aiding the cause of agriculture, and conferring a benefit on many of the planters at the South.

RURAL ECONOMY.

MULBERRY TREES AND THE SILK-WORM

Dear Sir,

Having a number of young people, that in common farming are of no manner of service, and altogether consumers of the fruits of the labouring hands; and wishing to find them some employment that may turn to advantage, I have thought that the feeding and rearing of the silk-worm, and its labours, might supply me with what I wish—and will therefore be much obliged to any of your correspondents, acquainted with the subject, to give me the necessary information, beginning with the planting of the trees, to the management of the cocuons, or silk balls; as,

1st. At what distance are the trees to be planted; whether singly, or in rows, and at what distance between the rows?

2d. How high are the trees to be suffered to grow?

3d. How are the *leaves* gathered to feed the worms; whether in branches, or the leaves picked off?

4th. Generally, the management of the trees, so as to supply leaves in the greatest abundance?

5th. Where a supply of the eggs of the silk-worm are to be obtained; and their management; and how the worms are managed so as to procure an annual supply?

6th. The house or room to breed the worms in, and the apparatus generally to conduct the business in the best manner?

7th. The proper time to take the cocoons; and their management in winding off the silk?

8th. What other (if any,) preparation is necessary to prepare it for market; and where can it be sold: and the usual price; and generally the expense and likely profit of the business, conducted by from six to ten young people, with an older one to superintend?

Your insertion of the above in your very useful paper (and not one of its least useful qualities, is the obtaining information upon any point, from any part of the continent,) will much oblige a constant reader and Marylander.

P. S. Could cotton in the seed[*] meet with a sale in Baltimore, and at what price?

FOR THE AMERICAN FARMER.

PLANTATION OF THE WHITE MULBERRY.

The best method of multiplying the mulberry tree, is from the seed; for as it grows it becomes accustomed to the climate, as if it were indigenous. It ought to be taken from the nursery at the end of two years, and placed in a dry and elevated place, about fifteen feet distant from any other tree. Two years afterwards it ought to be transplanted, and placed at the same distance; again, at the end of two years it ought to be transplanted, and always at the same distance. It may also be multiplied by slips or suckers, but it degenerates, and in the end perishes in the flower of its age.

The eggs of the silk-worm must be hatched in the month of May, at the time when the leaves have all their sap, and are still extremely tender; the leaves must be always gathered in the evening for the next day morning, lest they should not be moist. The quantity of leaves that one has should always be calculated, in order that the requisite quantity of eggs may be hatched. One ounce of eggs will produce 40,000 worms; 50 pounds of leaves are sufficient for 1000 worms. A tree six years old will not produce more than from 60 to 80 pounds.

The house should be very dry and well aired; the shelves on which the silk-worms are placed should be of wood, dry, and without any peculiar smell—no bad odour should be suffered to enter the apartment; that is to say, care must be taken to prevent the morning air from penetrating the room. The worms are subject to many diseases. When they are discovered to be diseased, they must be thrown away, lest the disorder should be communicated to the rest. When the time of making cocoons has come, small branches must be placed in the shelves and the worms must in no wise be disturbed. When the cocoons are made, the handsomest are to be left for seed; the others are to be detached from the branches, and thrown into boiling water; the thread loosens itself, and is to be divided upon a spindle. The price five dollars per pound.

It is necessary that the work should be directed by persons of judgment, either for watching the silk worms, or for choosing the leaves.

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[*] We suppose not.—Ed. Am. Far.

LADIES' DEPARTMENT.

GENERAL OPERATIONS OF COOKERY.

STEWING.

Stewing differs from roasting and broiling, in the heat being applied to the substance through a small portion of a liquid medium; and, from boiling and frying, in the process being conducted by means of an *aqueous*, and not by means of an oily fluid. It is necessary that the fire be moderate, for a strong heat suddenly applied would be very injurious. The liquids employed as the medium for applying the heat are usually water, gravy, or broth, the quantity of which must be such as shall prevent the meat from burning and adhering to the pan. It is not requisite that the liquid be made to boil in stewing. It should only be raised nearly to a simmering heat, which will retard the fluid being evaporated too quickly. The closeness of the vessel will also prevent the waste of the liquid. If it diminish too quickly, it must, from time to time, be replenished.

The management of the fire in cooking, is, in all cases, a matter of importance, but in no case is it so necessary to be attended to as in preparing stews or made dishes; not only the palatableness, but even the strength or richness of all made dishes, seems to depend very much upon the management of the heat employed in cooking them.

The most proper sorts of animal food for stewing, are such as abound in fibrine, and which are too dry or too tough for roasting. When beef or mutton is rather old and too coarse flavoured, and not tender enough for the spit or the gridiron, it may, by stewing, be not only rendered tolerably palatable, but even sometimes savoury and good. But the stewing process is not confined to flesh of this sort; for veal and other young flesh which abounds in gelatine, when properly stewed, is much relished.

The vegetables most usually stewed are carrots, turnips, potatoes, pease, beans, and other leguminous seeds. Some fruits are also cooked in this way.

Rationale.—Stewing is nothing else than boiling by means of a small quantity of an aqueous fluid, and continuing the operation for a long time to render the substance tender, to loosen its texture, to render it more sapid, and to retain and concentrate the most essential parts of animal or vegetable food.

If the stew-pan be close shut, it is evident that none of the nutritive principles can escape, and must either be found in the meat itself or in the liquid. The water or gravy in which the meat is stewed, being capable of dissolving the gelatine and albumen, the greater part of them become separated durring the simmering process. Now, since the firm texture of the bundles of fibres of meat is owing to the solid gelatine and albumen gluing them, as it were, together, when they are dissolved and disengaged, the meat must become greatly disorganized. These principles, as well as the fat and osmazome, are partly disengaged from the meat, and become united with the gravy. It is to these, indeed, that the gravy owes all its richness and excellence. The muscular fibres and the tendons acquire a gluey appearance and texture, and the whole forms a savoury gelatinous *stew, gravy,* or *soup*.

No scorching or browning of the meat takes place if the process is properly conducted; for the temperature to which it is exposed does not exceed the boiling point of water.

In the stewing of vegetables, saccharine matter is formed, the starch and mucilage are rendered soluble, and of course, set free the woody fibre, which either floats through the liquid or adheres together very slightly. It accordingly constitutes either a pasty fluid, or converts the vegetables to a soft pulp; sometimes their original shape being preserved entire, and at other times not.

BOILING.

Boiling is a much more common operation than any of those we have considered, with the exception perhaps of roasting. It consists, as every body knows, in subjecting the materials of food to the influence of heat, through the medium of boiling water, or of steam.

The water employed for boiling meat or pulse should be soft, and the joint should be put on the fire immersed in cold water, in order that the heat may gradually cause the whole mass to become boiled equally.

If the piece of meat is of an unequal thickness, the thinner parts will be overdone before the more massy portion is sufficiently acted on by the boiling water.

Salted meat requires to be very slowly boiled, or simmered only, for a quick and rapid ebullition renders salted provisions extremely hard.

Frozen substances should be thoroughly thawed, and this is best effected by immersing them in cold water.

Count Rumford has taken much pains to impress on the minds of those who exercise the culinary art, the following simple but practical, important fact, namely; that when water begins only to be agitated by the heat of the fire, it is incapable of being made hotter. and that the violent ebullition is nothing more than an unprofitable dissipation of the water, in the form of steam, and a considerable waste of fuel.

From the beginning of the process to the end of it the boiling should be as gentle as possible. Causing any thing to boil violently in any culinary process, is very ill-judged; for it not only does not expedite, in the smallest degree, the process of cooking, but it occasions a most enormous waste of fuel, and by driving away with the steam many of the more volatile and more savoury particles of the ingredients, renders the victuals less good and less palatable. it is not by the bubbling up or *violent boiling*, as it is called, of the water, that culinary operations are expedited.

One of the most essential conditions to be attended to in the boiling of meat is, to skim the pot well, and keep it really boiling, the slower the better. If the skimming be neglected, the coagulated albuminous matter will attach itself to the meat, and spoil the good appearance of it.

It is not necessary to wrap meat or poultry in a cloth, if the pot be carefully skimmed. The general rule of the best cooks is to allow from 20 to 30 minutes slow simmering to a pound of meat, reckoning from the time the pot begins to boil.

The cover of the boiling pot should fit close, to prevent the unnecessary evaporation of the water, and the smoke insinuating itself under the edge of the cover, and communicating to the boiled substance a smoky taste.

Cooks often put a trevet, or plate, on the bottom of the boiling pot, to prevent the boiled substance sticking to the pot.

Rationale.—When flesh or fish is boiled in an open vessel, or one not closely covered, the fibrous texture is rendered more tender: at the same time its nutritive quality is not much diminished For the temperature of the water or steam, never exceeding 212°, is insufficient to produce the partial charring, which roasting and broiling effect. But, as in stewing, the gelatine, albumen, osmazone, and fat, are developed and disengaged, and becoming united with the liquid in the vessel, form a soup, or broth The paler colour of boiled meat is owing to the blood being separated and diffused in the water. In frying, the boiling fat or oil enters into the interstices of the fibres which the disengaged animal juices have left empty. In boiling, in a similar way, the hot water takes the place of the blood, gelatine, fat, and albumen, which have been dissolved and separated from the fibres. The fibres are in this manner soaked and washed, first by the boiling water, and afterwards by the soup or broth which is formed, till the whole texture assumes a softened consistence, and pale appearance. It is this, rather than any softening of the fibres themselves, which seems to be the real effect produced, unless, with some, we consider the fibres as nothing more than minute and close-set bundles of blood vessels. This doctrine, however, the experience of every cook will disprove; for if the boiling be long continued, the fibres of the meat will alone remain, and so far from becoming more soft and pulpy, they will become dry and juiceless. If indeed the boiling point of the water be artificially increased to 212°, by pressure applied to the surface of the liquid, the fibres may be reduced to a pulp, quite homogeneous. When this is done by Papin's digester, or by any other apparatus of the same kind, and when the process under such circumstances is long continued, the hardest bones may be converted into jelly.

It is only by boiling that the more gelatinous parts of flesh can be completely extracted unaltered from such parts as are cartilaginous, ligamentous, or tendinous. [*Accum's Cul. Chem.*

APPLE BUTTER.

The following has been furnished to us, by a correspondent, as a correct account of the best way of making *apple butter*, so little known in the southern states, and so much valued in the northern:

"First, boil down the best flavoured cider, of selected fruit, (and sweet is the best to keep,) to two-thirds of the quantity put in. To every barrel of cider put in six bushels of apples, of best quality, pared, quartered and cleaned of the cores, and free from rots and bruises.

"As soon as boiled down one-third, as above, feed in the quartered apples as fast as they boil away, which must be done in brass or copper. It is best to have two kettles, in order to supply the finisher from the other, which keeps it from boiling the apples too much. It will require from 12 to 18 hours constant and moderate boiling, when it must be stirred at the bottom to prevent its burning, by a long handle, with a piece of wood three or four inches wide attached to the other end.

"To know when it is done, cool and try some of it on a plate, till the liquid ceases to run from it. Towards the close of it, some put in cinnamon, cloves and alspice.

"If only one kettle is used, each parcel of raw apples must be boiled or brought down to mush before another supply is added. If it scorches in the operation, it is ruined. As soon as done, it must be taken out immediately from the kettle into wooden vessels, to cool, and afterwards into crocks, or stone-ware, or wood; but in order to keep it best in summer, crocks or stone-ware are to be preferred."

SPORTING OLIO.

PARTRIDGE SHOOTING.

John S. Skinner, Esq.

Sir,—Believing the following result of an evening's amusement, will not be deemed unworthy a place under your "sporting olio," I cheerfully communicate it for that purpose:

On Tuesday evening last, I accompanied my friend, Mr. J. R. M., for the sole purpose of testing his abilities with a double-barrelled gun; of course I left my fowling-piece at home—and with only one dog, (my favourite Pan,) we sallied forth—when in less than two hours Mr. M. bagged 21 partridges on the wing, in 19 shots; not once missing, and with two wads brought down 4 birds. Can any of our sportsmen on Elkridge beat this?

Yours, respectfully, S. T. T.

Longcalm, Baltimore Co., 10th Nov., 1825.

[The parties are known by the Editor—and if their names were given, he would not presume, as he does, to say, that he vouches for the correctness of the above.]

NORWEGIAN PONEY.

A Norwegian Poney thirty two inches high, has been presented to the King, at Cumberland-lodge, where it now remains. This curious little animal is of a dun colour, its coat quite in the rough, is four years old, and of good symmetry. Many of the horse-fanciers about Windsor express their utter admiration of the sweet little fellow, it being so docile that it follows the groom, who has the care of him, up and down stairs like a dog, and lies down on the hearth rug before the fire. It has never yet been shod, will eat bread and potatoes as well as corn and hay, and drink beer. It was brought to the royal lodge in a neatly fitted fancy coloured covering, bound round by a girth, for the royal inspection; and was led by the groom to his majesty's apartments, who admired him as much on account of his docility, as for his diminutive size.

For our own parts, we are not friendly to the encouragement of small breeds, nor admirers of the freaks of nature, or the chilly contractions of inhospitable climes—excepting only as mere curiosities. For any kind of service give us bone; bone well proportioned and properly knit together; then muscle follows of course, with health, strength, and. according to *blood*, the gift of going along: such we apprehend to be also the opinion of his majesty on this truly national question.—[*Annals of Sporting.*

THE FARMER.

Baltimore, Friday, November 25, 1825.

☞Internal Improvement.--To meet the Convention on Internal Improvement, which is to assemble at Baltimore on the third Wednesday of next month. Delegates have been appointed in several counties of the state, and meetings are advertised to be held in others, for the same purpose. There is one to be held in Annapolis, and one in the city of Baltimore, on Wednesday next, the 30th of this month.

It is to be hoped that all the counties will appoint delegates, in pursuance of the suggestion of the good citizens of Frederick county. It is due to them as an act of courtesy, independently of the intrinsick importance of the subject to all parts of the state. The delegates, as far as we have seen the lists, are gentlemen of known influence and distinction for their publick spirit and services, and happily for the cause in which their talents will be employed, they have been chosen without reference to narrow sectional or party interests. One obvious benefit most result from the proposed convention; it cannot fail to bring together, as to a focus. much valuable information as to the internal resources of the state, and the practicability of improving, by human art and industry, the *natural* sources of wealth and population.

The delegates will, as far as we can judge, come together unbiassed, as to any particular measure—and as they have been deputed without solicitation, and will serve without "fee or reward," they may be expected to act with a single eye to the prosperity of the state, without any regard to the perpetuity of their own power, or that of any party.

☞Maryland Agricultural Society.—At a meeting of the Trustees of the Maryland Agricultural Society, on Saturday, 12th inst., there were in attendance Col. N. M. Bosley, B. W. Hall, Doctor Thomas, J. B. Morris, Jacob Hollingsworth, G. Cook, G. Howard, and H. V. Somerville, Trustees; and James Cox, Esq., Treasurer; and J. S. Skinner, Corresponding Secretary.

On motion of H. V. Somerville, Esq., a committee was appointed to present a memorial to the Legislature, soliciting public aid, in furtherance of the views of the society. Whereupon Mr. Skinner, Mr. J. B. Morris, and Mr. Carroll were appointed, with instructions to prepare and submit said memorial for consideration to the next meeting of the Board.

It was further resolved, that Mr. B. W. Hall, Mr. Williamson, and Mr. Carroll, be appointed a committee to revise the list of Premiums to be distributed at the next Show; and that they submit the result of their proceedings to the next meeting of the Board, for its consideration and final adjustment.

The Board adjourned to meet on Thursday, the 8th of December next, at Lexington, the residence of David Williamson, Jr., Esq

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☞Five Thousand Dollars have been offered for the apprehension of the murderer of Mr. Sharp, an eminent lawyer of Kentucky. The circumstances, as detailed in the papers, are the most aggravated and atrocious that ever characterized any case of homicide, except that which happened in Cecil county, of this state. Col. Sharp had admitted the assassin, to afford him a resting place for the night; and in the act of showing him to a room, was mortally stabbed, almost in the very arms of his wife.

Plough.—A farmer of Slippeback, in Moravia, has just invented a plough, drawn by a single horse, which makes three furrows at a time. The Society of Sciences of Vienna, have rewarded him by a gold medal.

[The above is, doubtless, the same as the *eschelon plough*, invented by a gentleman of this state, residing on West River, a member of our Legislature, and of distinguished abilities.]

Durham Cattle and Southdown Sheep.—In the packet ship Algonquin, Captain Dixey, have arrived a Bull and a Cow, of the short horn Durham breed, and two Southdown Sheep.

They were selected by one of the most experienced graziers in England, and have been imported at the expense of John Hare Powel, Esq. The exertions of this gentleman to improve our breed of domestic animals, are beyond all praise. He spares no pains and no expense.

We are sorry to state, that two Leicestershire Sheep, which also had been selected with great care, died on the passage. [*Phila. Gaz.*

[The Ram cost 15 guineas on the farm, 120 miles from the port of embarkation.]

Agricultural.—At the late annual meeting of the Pennsylvania Agricultural Society, held at Prospect Hall, in Philadelphia county, almost every one of the premiums for neat cattle were taken by John Hare Powel, Esq. who relinquished the whole of them, amounting in value to $295, for the benefit of the society. This public spirited gentleman has taken a deep interest in the improvement of the breed of cattle, and has spared no pains to procure and intermix the most approved descriptions. Every animal that obtained a premium, whether belonging to Mr. Powel or not, was of the breed of "Improved Durham Short Horns, from Mr. P's stock."—[*Nat. Int.*

Register of Debates in Congress.

Messrs. Gales & Seaton, editors of the National Intelligencer, have issued the first volume of their *Register of Debates in Congress;* a work of immediate usefulness for numbers, and of much historical importance for the whole country. Its object is, as the editors mention in their preface, to present, from year to year, in a portable but durable form, the history of the legislation of the general government. They have adopted the plan of furnishing for the purpose, not merely the principal debates of Congress, but the most important reports of leading committees, the messages of the President, the chief communications of the different departments of the executive branch, and the whole mass of the acts passed during the session of the legislature. A sufficient index to the Debates is added.

The public value of such an enterprise as this Register, must be at once obvious to every intelligent person:—if it had been coeval with Congress, and regularly executed, the series of volumes would have been inestimable. All of us would have had within easy reach, what is now almost unattainable by any one; we mean, authentic and copious information of the prevalent opinions and controversies; of the projects and views of statesmen; of the situation of domestic and foreign affairs, and of the general course of the government and advancement of the nation; in every year since the organization of our present political system. Messrs. Gales & Seaton deserve to be extensively patronized on this occasion, and cannot fail, we think, to succeed. [*Nat. Gaz.*

A traveller has recently made the journey from New Orleans to New York, through the interior of the country, in twenty-five travelling days, for $92 only! His route was up the Mississippi and Ohio rivers to Pittsburg, in 17 days—thence to Erie, (90 miles) in one day—thence to Buffalo in 2 days—thence to New York in 5 more. The whole distance, nearly 3000 miles, with only 90 miles travelling in a stage, having been performed by canal and steamboat navigation. When the Massachusetts canal shall be completed to Albany, we shall then have an interior communication between the extreme northern, western, and southern sections of our country.

Marketing.—Butter, lb. 25 to 31 cts.—Chickens, per doz. $1.37½ to 1.50—Geese, 50—Turkies, 75 to $1.25—Ducks, pair, 37½ to 62—Eggs, doz. 18¾ cts. —Beef, prime pieces, lb. 8 cts.—Veal, 10 cents.—Lamb, 5 to 6 cts.—Pork, clb. $4.50—Irish Potatoes, bush. 75 cts. to $1—Sweet Potatoes, 75 cts.—Turnips, 50 cts.

Tobacco.—Amount of inspections in the state warehouses, during the last week—123 hhds.

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On Corn and Cob-meal for Feeding Cattle—Gov. Lincoln's Address at the Worcester county (Mass.) Cattle Show—Brighton Cattle Show—Hartford (Conn.) Cattle Show—A Looker on at the Hartford Cattle Show—Proceedings and Show of the Fredericksburg Agric. Society—Exhibition and Proceedings of the Agric. Soc. of the Valley, Va.—Exhibition of the Albemarle Agric. Society—Comparative profits of capital in Horses and Sheep—Culture of Wool—Sales of Sheep at Rambouillet, France—Public Sale of Wool—Inquiry on Horse Mills—Mr. Smith's Cotton Planter—Mulberry Trees and Silk Worm—Plantation of the White Mulberry—General operations of Cookery, Stewing and Boiling—Recipe for making Apple Butter—Partridge Shooting—Norwegian Poney—Editorial, &c.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	35	36		
COFFEE, W.I. Green, .	—	18½	20	22	25
do. Common,	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	18	20		
Georgia Upland, . . .	—	15	16		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33	34	37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	3 50	
Shad, trimmed,	—	6		7	
FLAXSEED, Rough, . .	bush	1 10	1 12		
FLOUR, Superfine, city,	bbl.	5 00	5 50	6 00	6 50
Extra . . . . do.	—	5 25			
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	53	57		
Wheat, Family Flour,	—	1 05	1 10		
do. Lawler, ...	—	85	95		
do. Red, ...	—	93	95		
Buckwheat, ...	—	55	75		
Rye, ...	—	54	55		
Barley, ...	—	90	95		
Clover Seed, Red . .	—	5 00		5 50	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	bush	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36		
Peas, Black Eyed, . .	—	1 00		1 50	
Beans, White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	200			
HOPS, ...	lb.	28	30		
HOGS' LARD, ...	—	10		12	
LEATHER, Soal, best,	—	27	28		
MOLASSES, W. India,	gal.	35	38		50
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	1 87½			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2			
OIL, Whale, common, .	gal.	30	32		
Linseed, ...	—	90			
PORK, Baltimore Mess,	bbl	13 00	13 50		
do Prime, . . .	—	10 50		12 00	
PLASTER, cargo price,	ton.	5 37½			
RICE, fresh, ...	c.lb.	3 00	3 50	5	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	5½	7½	9	10
WHISKEY, 1st proof, .	gal.	26	28	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37½	50	
SUGARS, Havana White,	c.lb.	13 50		15 00	16 00
do. Brown, . .	—	11 00			
Louisiana, ...	—	10 00	11 00	11 50	12 50
Leaf, ...	lb.	19	22	20	22
Lump, ...	—	16	18	19	
SPICES, Cloves, ...	—	80		1 00	
Ginger, Ground, . . .	—	7		10	
Pepper, ...	—	18		25	
SALT, St. Ubes, ...	bush	42	45		
Ground Alum, . . .	—	50		62	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 25		
Lisbon, ...	—	1 20	1 25	1 50	1 75
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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AGRICULTURE.

ADDRESS OF JAMES BARBOUR, ESQ.

President of the Agricultural Society of Albemarle, at their meeting on the 8th November, 1825.

To the Members of the Agricultural Society of Albemarle:

I salute you with brotherly affection—While I cannot forbear giving utterance to my regret at the resignation of my illustrious* predecessor, I owe you a warm expression of my gratitude for the proof of your kindness manifested in calling me to preside over your institution.

As I am prevented by other duties from a personal attendance on your meeting, which was my very sincere wish, permit me, in compliance with your resolve at your last annual meeting, to lay before you some reflections on the great and interesting objects, to promote which, was the purpose of our association.

Societies like ours, when cherished with a *persevering zeal*, cannot fail to be highly beneficial. It is, however, not to be disguised, that we have been wanting, heretofore, in this essential quality. It would ill become me to conceal, from motives of false delicacy, the cause which has retarded our successful progress. A disease, otherwise inveterate, when fearlessly probed, and its sources ascertained, will sometimes yield to the remedies suggested by the discovery. Animated by this hope, I point with less concern, to the cause of our disappointment, rendered the more worthy of particular notice, as this defect is charged upon us as a reproach to our general character. For while justice is done as to the generosity of our purposes, and the facility with which we resolve, we are charged with a waywardness of disposition, and tiring too soon in a good cause. By your future course you may give one example, at least, to the contrary That you have the most ample inducements to persevere in your very laudable purpose, a few suggestions will satis [illegible] rdy prove. Without intending to flatter you, I must be permitted to say, that I know not of any institution in any part of the United States, possessing a larger capital of intelligence, than is furnished by the members of your association. Add to this our various and fertile soils, happily adapted to the growth of some of the most valuable products of our country; our salubrious and delicious climate, our convenience to navigation, and above all the centrality of our position, with the University in sight. With these weighty recommendations, I think I may state, without the fear of contradiction, that there is no similar establishment which offers better guarantees of extensive usefulness than the one I have now the honour of addressing; and which cannot fail to be redeemed if you will pursue your object with a becoming zeal. This, however, can be effected only by exciting generally among us a taste, and if I may so express myself, a passion for agricultural pursuits. The most superficial observation readily ascertains that the intellectual energies of our state have taken a most unfortunate, not to say a pernicious direction. The learned professions, as they have been gratuitously called, have absorbed too large a share either for the benefit of individuals, or of the community. They are surcharged; and hundreds who might have been useful agriculturists, find themselves disappointed, which too frequently is the cause or the pretext of idleness, dissipation, and ruin. Let me not be misunderstood. I am far from believing that there is less talent requisite for a thorough knowledge of the science of agriculture than of other pursuits, and still further from suggesting that less time and attention are necessary—and the very erroneous opinion that every man may succeed in this pursuit without reflection or experience, has contributed essentially to our injury. For while every other pursuit, the humblest as well as the highest, requires a laborious apprenticeship to ensure success, every man considers himself a skilful farmer by instinct; and hence if every other pursuit fail him, he looks to agriculture as a safe residuary resort. The professions have their limits.—Clients and patients are so, not voluntarily, but by necessity.—Hence, lawyers and doctors can only be sustained to a limited number. On the contrary agricultural employments are boundless. How desirable is it then, that our parents instead of disturbing themselves with the anxious inquiry what shall I do with my sons—instead of gambling in these professional lotteries with a hundred blanks to a prize, should direct the genius and energies of their sons to the nobler employment of agriculture—that good divinity who never refused her favours to a votary, but dispenses them with a liberal hand, proportioned to the skill and industry with which she is solicited The cause of this mischievous propensity is worthy of inquiry. Its detection and exposure may at least weaken, if it cannot entirely eradicate the propensity itself. The thirst for distinction is common to all mankind, and is the great impulse of the moral world. What shall constitute distinction depends on the decision of mankind, however irrational that decision may appear. Take an illustrious example. Although reason and humanity denounce as a monster, the man who destroys thousands of his kind for no other purpose than to gratify his own ambition; yet it is before this idol, standing on a pedestal composed of human carcases, that the survivors fall down and worship. It is the spirit of idolatry among mankind which generates false gods. Bel and the Dragon will always have ministers of their altars, so long as they are permitted to eat of the fat sacrifices of their dupes. Without meaning to assimilate the cases at all, but frankly to present the caprice of human opinions, I will point to the superiority allowed to the eminent in the learned professions—nay to [illegible] modest incumbent. For the title itself confers a distinction. While the farmer, no matter how intelligent—no matter what improvements he has made in the science of agriculture—no matter what errors he may have corrected, or to what extent he may have contributed to the comfort of his species, is left undistinguished, and crowded out of notice, by the favoured classes to which I have alluded. This is the result of a servile submission to tyrant custom—a custom established in other times. Let us hope the light of the present age promises, with us at least, a more rational barometer; when all human pursuits will be appreciated by a standard, which recognizes the happiness of mankind as the only rule of its decision. Then agriculture cannot fail to occupy a distinguished place in the esteem of the world. In hastening the advent of this epoch you may essentially contribute, by the sanction of *your* example, and your zealous exertions to elevate this most valuable of pursuits, and attaching to it the importance it deserves, and of which it has been bereaved by the vicious taste of mankind.

The first step to this desirable result is to address to the Legislature a respectful memorial, asking for the establishment of an Agricultural Professorship in your University, to which should be appended a pattern farm, of various soil and considerable extent. I am persuaded the only obstacle of success will be the novelty of the application. With us, however, that presents a difficulty of transient duration. Every particular blessing we enjoy—our peculiar constitutions—our liberty of conscience, were novelties to ourselves less than fifty years ago, and are so esteemed now by a vast majority of mankind: and yet so estimable are they in our view, that we would lay down our lives in their defence. To what more legitimate object can a portion of the literary fund be applied. If we look to the source from whence it was derived, to the all-important purpose to which it is to be directed, or to the number of our people to be benefited, we are met in each view with a most decisive answer in its favour. The cultivators of the earth paid 99-100 of every dollar of the fund. The improvement of agriculture is the end of the proposed expenditure, and the numbers to be benefited, the almost entire population of the State, both rich and poor—there is no aristocracy in this. If any man sneer at this proposition, ask him how he gets his clothing or his bread. His answer will be an extorted admission of the importance of our calling. How long is agriculture to be abased? How long are we to be beasts of burden? How has it happened when every other science has its endowments that this alone should be neglected? An appeal to the representatives of the people in General Assembly convened, could not be in vain. A large majority of themselves looking to the cultivation of the earth alone for their subsistence, and their constituents almost exclusively so, would seize with eagerness an opportunity to do something for this long neglected interest. While every other human pursuit has the advantage of societies, and a vast proportion of the fostering hand of government: surely Virginia priding herself on her peculiar, and I think just partiality for the independent character of tillers of the earth, will not withhold this little boon from the object of her partiality and affection. The Legislature cannot fail to look to our condition in comparison with other interests, and in that condition to perceive how just is our claim. Those who pursue commerce, and manufactures, and trades of every kind, from the paucity of their numbers and concentration of residence, (generally living in town) readily associate to promote their respective interests—and by the easy communication thus continually enjoyed, every advantage derived from reflection or experience becomes at once common property, while the isolated cultivators, scattered over a wide surface, and whose occupations confine them to their homes, are destitute of this opportunity; and hence this [illegible] others. By the proposed establishment a focus is presented, where the scattered rays of information may be brought to a point, and from which they may be easily disseminated throughout the community. If a measure in itself so obviously advantageous needs further support, examples might be found in other states. The state of New York, whose march to prosperity has been unrivalled, and for which she is much indebted to the liberality of her counsels, distributes annually large sums to agricultural associations. Let us suppose we have succeeded. Agriculture is suddenly raised from its abasement, and placed on equal ground with any other pursuit by becoming a part of a liberal education. It too has at last its students. The professor, equal to his task, extracts light from every kindred science. His theories may be tested by experiment on the adjacent farm—there too every invention and every improvement of this fruitful age, connected with rural economy, may pass the crucible of actual experiment, every quackery exposed and real utility ascertained; every seed and every plant gathered from distant nations, by the laudable exertions of our seafaring brethren, cultivated; every animal in every variety, bred; and the youth of Virginia, our future hope, eye-witnesses of all, to adopt or to reject as the result recommends, and thus rapidly to diffuse the advantages through every part of the state. Without some advantages of this kind, the most valuable improvements are confined for years, to particular neighbourhoods. It is too hazardous for individuals, warned by frequent impositions, or frequent failures, to encounter the cost and consequent risk, of making experiments.*

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* Mr. Madison.

* It was only in the last winter I was addressed by an intelligent farmer, I believe the President of an Agricultural Society near Winchester, for the purpose of

But the principal advantage is yet to be noticed—its great moral effect upon the taste and pursuits of our citizens. Agriculture, ennobled by the fostering hand of the government, and made profitable by improvement, becomes an object of attraction. The father and the son, instead of standing aloof as heretofore from a degraded pursuit, will be found industriously and passionately contending for a prize now made highly honourable. The law and physic will be relieved from their excessive incumbrance—the tables of the public offices will cease to be crowded with unavailing applications for employment. The public-houses and the cross roads will give up their votaries. In fine, if these are not idle dreams, its beneficent influence on the whole circle of society will be incalculable.

Meanwhile the measure you have adopted, and which convenes you together to-day is well calculated to effect, in part, the end I have been recommending. In offering premiums to those most successful in the various branches of rural economy, you awaken emulation by inculcating the useful lesson that distinction may be acquired in this walk of life. In the efforts which are made for superiority, especially if attended with success, a taste is produced for the pursuit. You thus set in motion and in a right channel the energies of our people, which cannot fail to develop, in part, our resources, which are boundless, and a consequent improvement in every object distinguished by your rewards. Such I believe has been the result of every similar experiment where it has been pursued with perseverance; and in a neighbouring state I have had the satisfaction to be an eye witness of its success.

Your beginning may be small—perhaps even discouraging; but faint not—it will increase every year till your wishes are realized. For remember, we are a young and thriving people. Our advance, heretofore, has been retarded by an exhausting system of tillage, and our ranks thinned by large and continued emigrations. Both these causes are rapidly ceasing. The land proprietor has become sensible of the necessity of improving his acres, while the tide of emigration has essentially ceased to flow. Small, therefore, as may be your commencement, you may be cheered with the reflection that its obvious utility will conciliate additional support, and that it will swell with an increasing tribute from every succeeding year. I therefore repeat the admonition, faint not—as you regard your character for perseverance, or cherish a desire for the improvement of your country. You have immediately in your view a most conspicuous proof of perseverance in a good cause. By it was obtained your University—and, indeed, the means which sustain the system of general education in Virginia. How emphatic was the appeal to the Legislature, when even the small sum was asked, of twenty thousand dollars, with which to commence a literary establishment—yet how ineffectual, till at last, after repeated efforts, in the year 1808, a bill was carried through with difficulty, appropriating the avails of fines and penalties to this object—the whole not equal to three thousand dollars per annum. It has already swelled to nearly two millions of dollars, especially if you estimate what has been expended. I recur, fellow citizens, the more readily to this example, because it is well calculated to give you confidence in your success, and more especially as it was my good fortune, for such I esteem it, to have brought forward and advocated with my feeble, but with my whole strength, this bill, which created the head spring, scarcely perceptible in the beginning, whose waters have already become a mighty current, destined, I would fondly hope, to bear its blessing to every part of my native state, till time shall be no more.

I pass to another subject of no less interest. The treatment and management of our slaves. They form a large, if not the principal part of our labouring class. Such a class, whether bond or free, white or black, must exist in every community, as they are the indispensable foundation of the social fabric; every mitigation of their condition, consistent with the end of their existence, is therefore a solemn obligation on those to whose comfort they contribute. It has pleased Providence to permit with us a large share of this useful class to be slaves. I esteem it fortunate as true, that their good treatment is recommended no less by interest than humanity, and that their being subjected to a proper discipline, and made to perform a reasonable share of labour, is equally beneficial to themselves and their owners. When well treated—by which I mean abundantly fed, well clothed, and in sickness due attention and every comfort their condition requires, and in the power of their owner to administer, they are enabled to perform, and do perform, in most instances with alacrity, so much more labour than when otherwise used, as most completely to indemnify their employer. And every day's observation ascertains to us, when proper authority is not exercised, that their owners are unable to provide for them comfortably—that such slaves become entirely insubordinate, and are generally a pest to the neighbourhood. And hence, permitting them to do nothing, which by some is termed humanity, is attended alike with the injury of the slave, and the speedy ruin of the owner, who surrenders himself to this misguided indulgence. Their diet should be bread without limit—a daily (if it be a small one,) allowance of meat, (bacon, if practicable) milk in the summer and autumn, and cider, with those who have orchards, in the winter and spring, to supply the absence of milk. Add to this on proper occasions a small quantity of whiskey—six or seven gallons to a labouring hand during the year. The advantage is believed to be far beyond the cost. Their clothing should be three suits—a good warm one for winter, and two linen for summer; and there should be on an estate of any extent a hand to cook and wash for the labourers. The humane attention of the master is particularly appealed to in sickness, or when they become old and infirm. In the former situation, they are entitled not only to medical aid,* but to the immediate attention of the master. He should give of his stores at that time with no sparing hand. In raising children one place of rendezvous under the superintendance of some elderly woman, who unites kindness with authority, and who is responsible for their comfort and safety, is productive of the best results.† To this kind of treatment I have added rewards to the most deserving. The cost is trifling, and the effect manifestly beneficial. It inspires gratitude to the master, and becomes a stimulus to good conduct.

The relation of master and slave thus maintained, is deprived of its otherwise harsh and unfriendly character, produces the consoling reflection, that every thing has been accomplished which the actual posture of our situation admits—leaves no regret, except what results from uncontrollable circumstances, and in its practical operation on the slaves themselves, is attended with content, with comfort, and a degree of happiness far beyond what their countrymen enjoy in their native land, and challenging without fear, a comparison with the labouring classes in some of the civilized countries of Europe. Any effort forcibly to disturb their relation with a view to a change of their condition, which can be attempted only by those who do not foresee, or seeing, are reckless of the consequences, cannot fail to make worse the condition of the slaves. For our own daily experience teaches us, that the condition of the slaves, when well treated, is infinitely preferable to that of free people of colour. We know that they are ignorant, indolent, and demoralized, having no ostensible means of acquiring their subsistence, wretched as it is, so as to leave no doubt that it is derived from prostitution, from theft, and from begging, and to be rid of whom is an object of our first desire. Our slaves, brought amongst us by other generations, not only under the sanction of, but by the existing sovereign authority—mixed with us in such numbers as to be unmanageable, except in their present condition; guaranteed as property to us by the fundamental principles of society, both implied and expressed, they are, and of necessity must so continue under our control; and such, I believe, is the settled conviction of a vast proportion of the American people, to whatever section we refer. The croakings of the distempered, who seek to establish a character for philanthropy at the expense of others; whose speculations are indulged without scruple, at the hazard of the future peace and happiness of a great nation; who encounter neither risk nor sacrifice in the projects they propose, will soon be consigned to the oblivion they merit. Every man of observation is sensible that this is a chord of great sensibility, which, when rudely touched by a strange or unskilful hand, vibrates in terrible discord through a large portion of this Union. He, therefore, who looks to this Union, as the pledge of our future hopes, no matter where accident may have placed him, will unite heart and hand in scowling into contempt those wild or incendiary projects.

From the treatment of our slaves, I naturally am led to the treatment of our managers, or overseers. This is one of the most difficult as well as perplexing objects, on which we have to act. From the almost universal complaints on this subject, and the continual changes that are taking place among them, there must be something radically wrong in this part of our administration. I have endeavoured to explore the causes, and I will proceed to give you the result of my reflections. Undue prejudices are indulged against this class of people. That such a class is necessary to the state of society, their existence and employment unquestionably prove. A prejudice against that which is indispensable, cannot be defended on rational grounds. That there are vicious men in this class is unquestionable. But are there not vicious employers too? And it is very well worth the inquiry, whether this very prejudice, and its consequent ill treatment, is not calculated to produce the causes of complaint on whose existence this prejudice seeks to justify itself. Penurious salaries—suspicion—harsh treatment, tend to degradation, and debasement. Add to this, a continual restlessness, and a disposition to an annual change—and you have summed up the general treatment to which they are exposed. Thus you move on in one continued circle, and not unfrequently from bad to worse. We are all aware of the dilapidation of a tenement which changes hands every year. It cannot be expected, either from an overseer, or a tenant, that he will take much heed to the future, in which he does not feel himself at all interested. Indeed, it is impossible that he can succeed so well the first year. He has to learn the wishes of his employer, and the disposition of the hands under him; the capacity of the

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learning whether our grain threshing machines were really useful, although they had been with us in the most successful operation for more than twenty years Upon my favourable report he had one made, and is, of course, highly pleased.

[*] I think it well worthy of communication that my principal manager keeps by him the Virginia Epicac.—vulgarly called Indian physic, which he has administered with the greatest success for upwards of twenty years; as in that time he has never lost a single adult by sickness.

[†] As an evidence of which my slaves have duplicated in less than twenty-five years.

latter for labour; the different kinds of soil he has to cultivate, and a long list of details which cannot be acquired in a year. Why not try a different course. In my own case, and I draw frequently on my own experience, for one fact is worth a hundred theories—I give liberal wages, abundant finding, and many indulgences. I treat them kindly, and make them feel a respect for themselves. I avoid frequent change. In return I have received honesty and zeal. My principal manager has lived with me between twenty and thirty years. I cannot ascribe my success altogether to accident; fortune may, for a short time, exercise an influence; but uninterrupted success, for a long series of years, must be rooted in a deeper and more permanent cause—and instead of grudging them their wages, I rejoice to see that while they are securing my independence, they are acquiring one for themselves, due to their honesty, industry and zeal.

It has long been a common remark in Virginia, that property changes hands with great rapidity; and hence has become a kind of apothegm that it never reaches the third generation. This is an evil. For I am persuaded the wish is common to us all, that our property should (especially if the result of our own labour and pains,) be enjoyed by our posterity. The man who makes his property, rarely loses it. None can guard, to be sure, against misfortune; and hence its consequences are beyond my remarks. But the generation ignorant of the difficulty of acquiring it, is generally more apt to diminish than increase their patrimony. This is produced in part by our kind of property. The man whose income is certain, like the holder of the public stocks, knows its annual amount to a farthing. If he spends more, he diminishes his capital knowingly and designedly. But with us, as the products and the price are uncertain, we have much for hope and illusion to act on. Is there one among us, even the least sanguine, who has not overrated both? With the sanguine the mischief is increased. Our next error is to purchase on credit. We are to make ten hogsheads of tobacco which will bring us $1500. A thousand of this we may anticipate—it is spent accordingly. The scales and the price strike off one half—we are in debt; but next year I will repair the loss. I will make, in our language, an overgrown crop. We spend on this calculation; again disappointed, and again; till at last the sheriff comes, to tell us some other person must take the management of property the use of which we have not understood. One cure to this evil is, not to spend till you have made the money. You buy with the *money* one third more than on credit—and you look at your dollar, before you pay it away for a useless article. Not so when you buy on credit. Another source of our misfortunes is, that accounts are rarely kept. A prudent man keeps a chapter of profit and loss. He marks his in-comings and his out-goings. He who has not done so, can form no idea of the contingent expenses of our kind of property. The items, singly, make no impression; united, they not unfrequently form the gulf of our independence. The same prudence to which I have alluded, should induce every man to keep an account of his debts—no matter how long or black the list; if *he* does not know them, his neighbours will. Let him have the fortitude to look his affairs in the face—and do more; show them to his family, especially to his wife, if he has one. If a prudent woman it will be of service. If imprudent, it will do no harm. But there are very few of the latter, and I cheerfully bear evidence to the care and economy of the females When in a situation to give me an opportunity to observe, I can safely say I scarcely ever knew a widow on whom the care of an embarrassed estate devolved, that did not extricate it, if it was possible. But when the husband disguises the state of his affairs, and his wife acts on what she sees, it is not unfrequent that by her expenditures she becomes the unconscious instrument of extravagance.

Let me recommend to you to procure by a legislative act, your incorporation. It will give you a legal existence, essential to the direction of your funds, and the preservatien of your property.

I am admonished by the length of this address, that I have enjoyed at least my share of your attention. At some future period, more propitious than the present, I will offer some further views—the result of observation or of reflection. In the mean time, I cannot conclude without conjuring every member to do his duty, as though our success depended on his particular exertions. Many abstain from making communications, because they fear they will be criticised—idle fear. Our humble essays are not food for criticism—besides, the garb in which information is communicated is never noticed. One important fact is worth, as to the business in hand, a whole cart load of rounded periods. We go for the grain, careless of the chaff. Others fear that their information is not of sufficient importance—how unwise. Is not the ocean alike fed by the lesser as the greater streams. Does the mighty tide of human improvement reject the offering because it is small? Profit, then, by the moral of these illustrations—esteem nothing small or insignificant whose tendency is the enlargement of our stock of knowledge. JAMES BARBOUR.

Washington, Oct. 24, 1825.

[From the Southern Patriot.]

SOUTH CAROLINA AGRICULTURAL SOCIETY.

The Committee on Premiums and Arrangements, present for the consideration of the society, the following resolutions:

Resolved, That the following premiums be awarded by the society at their stated meeting in February, one thousand eight hundred and twenty-seven, to consist of the gold medal, value $20, or the silver medal, value $10, or pieces of plate of equal value, at the option of the fortunate competitors, with appropriate inscriptions.

1st. To each manager, (not exceeding four,) of two or more plantations, who shall produce the most satisfactory testimonials from those by whom he has been employed, of his diligence, skill, good management, and humanity, for three preceding years—*The gold medal.*

2d. To each overseer, (not exceeding four,) of one plantation, who shall produce similar testimonials—*The silver medal.*

3d. For the best conducted experiment to be made in the year one thousand eight hundred and twenty-six, on not less than one acre of land, wherein by any mode of culture not generally practised in this state, or by the introduction of any new kind of manure, or by the application of the usual manures in an unusual manner or quantity, the production of black seed cotton shall be materially improved—*The gold medal.*

4th. For a similar experiment on short staple cotton—*The gold medal.*

5th. For do on rice, on not less than five acres of one entire field—*The gold medal.*

6th. For do. on flint corn, on not less than five acres.—*The silver medal.*

7th. For do. on gourd seed corn, on not less than five acres—*The silver medal.*

8th. For do on sweet potato, (convolvulus battatas,) on not less than one acre—*The silver medal.*

9th. For do. on Guinea corn, (Holens sorgum,) on not less than one acre—*The silver medal.*

In order to obtain the prize for either of the above articles of cultivation, the candidate must forward to the secretary of the society, a particular detail of the situation and quality of the soil, the preparatory culture, the quantity and preparation, if any, of the seed, the kind and quantity of manure, with the time and mode of its application, the culture while the crop is growing, the mode of collecting or harvesting, and the product; stating also the product of the same quantity of land of similar natural quality, cultivated in the common manner in the same season. The facts and circumstances to be certified by one or more respectable witnesses.

Resolved, That the following premiums be awarded for animals to be produced at the Cattle Show of the society, in February, 1827.

1st. For the best stallion—*The silver medal.*

2d. for the best full-blooded mare—*The silver medal.*

3d. For the best bull for raising working oxen—*The silver medal.*

4th. For the best bull for raising milch cattle—*The silver medal.*

5th. For the best cow—*The silver medal.*

The animals to be produced before the society on the Monday and Tuesday preceding the Charleston races, at such place in or near Charleston, as the society shall appoint, timely notice whereof will be given in the public papers. When convenient, a specimen of the progeny of each to be produced, as the best evidence of the value of the animal—without it a certificate of their ability will be required, and in all cases certificates of their having been bred within the state, or having been imported and kept for service, the preceding twelve months.

Resolved, also, That premiums will be awarded for the following machines:

1st. For the best improved machine for ginning black seed cotton—*The silver medal.*

2d. For the best constructed machine for threshing rice, which has been in actual operation for two months, adapted to general use, by threshing perfectly fifteen bushels per hour, with the force of three horses, or four mules, or three yoke of oxen—*One hundred dollars, or plate to that amount.*

Extract from the minutes.

CHARLES E. ROWAND, *Sec'ry.*

Oct. 26th, 1825.

HORSES, SHEEP, &c. IN MISSOURI.

Extract from a respectable Correspondent—dated *St. Genevieve, Missouri, Nov.* 2, 1825.

Our climate is very fine, for the productions of the northern and middle states. As an evidence of its mildness, very considerable numbers of horses have run at large till they have become wild, and have subsisted without ever being fed, or having other food during the winter than the *range*, although cane has probably disappeared in this part of the state for the last fifteen or twenty years. Sheep do extremely well; they are generally good mutton (unless they are breeders,) the whole year. The flavour of the mutton is generally remarked by those who eat it, to be better than of the northern states. I think the quality of the wild grape which grows here to be very considerably superior to those growing on the upper part of the Ohio river, with which I have had some acquaintance. Grapes, when cultivated in gardens, grow very luxuriantly, produce abundantly, but are very subject to mould or rot, before arriving at maturity. I have not known any considerable attention paid to the culture of them, and probably the above defects arise from faulty management. If I should become a farmer sufficiently informed on any subject to communicate any thing which I should think would be worthy of a place in the columns of your paper, I shall not fail to do so. It would be extremely gratifying to me, to be able to contribute but a *mite*, to that usefulness, for which I think your paper so peculiarly eminent. If any particular inquiries of a local nature, should occur to you, on which I could give you any satisfaction, I should communicate them with great pleasure; at the same time stating, that I hope through the medium of your paper, you will become acquainted with those who would be able to serve you much more satisfactorily in this respect.

FINE SHEEP.

This county, nay this *country*, is much indebted to Mr. Christopher Dunn, of this city, for his exertions to improve the breed of our sheep In addition to what he has formerly done, he this week purchased in New York, from on board the ship William Edwards, Captain Sherburne, direct from England, three sheep, a buck and ewe of the Lincolnshire, and an ewe of the Southdown breed, which arrived here yesterday, on board the steamboat James Kent, in fine condition, without having set foot on American soil until they were landed in our city, when they were immediately sent to Mr Dunn's farm in Guilderland, to be added to his superior stock of this valuable animal. May success continue to crown his enterprise, and Albany mutton ever be hailed as the best in our land. [*Albany Daily Adv.*

[From the New England Farmer]

HOLDERNESS BREED OF CATTLE.

Sir, *Easton, Nov. 7th*, 1825.

I have in my possession some of the descendants of Denton, (a bull of the "Improved Short Horn" breed,) and some from the celebrated Holderness. I have made some inquiries respecting the breed of the latter, but have never been able precisely to ascertain it. I have understood, however, that he is not of the "Short Horns." Being desirous of determining the value of different races of cattle, I would inquire through the medium of your useful publication, respecting the breed and pedigree of Holderness. If you, Mr. Parsons, or any of your correspondents could give such information, you would oblige your servant. Eastonian.

[We have observed that the progeny of this Bull· the property of Gorham Parsons, Esq , have taken a goodly number of the premiums awarded in Massachusetts; and, considering the discernment of those by whom they have been bestowed, his history ought to be ascertained and recorded.—Ed. Am. Farmer.]

Premiums for Singular Objects at late Cattle Shows.

To Robert Hunter, of Marlborough, a special premium for a native sheep and her 4 lambs of one yeaning, $3; B. L. Judkins, of Billerica, for two long woolled sheep, $3; John P. Webber, of Beverley, for his fine specimen of mustard manufactured from American seed, $2; C. Webster, of Salem, for his specimen of hats, ingeniously manufactured from the finest Spanish wool, and knapped with beaver and musk-rat, the work having been done by Mr. Jacob Hooper, of Marblehead, $3; Mary Anthony, of Salem, for a patchwork counterpane, containing 9592 pieces, and wrought by herself when under 9 years of age, in the most perfect manner, $2.

[Extracts from late English papers received in exchange for the American Farmer.]

WOOL.

The following is from a person long resident in Sussex:—So great an effect has the most trifling change of soil or herbage on the growth of wool, that, on two farms, adjoining each other, on the South Downs of Sussex, there is annually a difference in the value of their respective growths of from 3s. to 4s. per tod, even though the ewes from which it was shorn should have been originally equally good as to breed and staple. The experiment has, he intimates, been tried for several succeeding years, by the occupants of the farms alluded to having exchanged, each year, fifty ewes of the same age and quality, and the effect ascertained, by the wool of one of the parcels of ewes invariably improving, the other invariably degenerating. Nor is this, he signifies, the only instance of the kind he has witnessed. Thin chalky land, covered with a fine-textured turf, interspersed with wild thyme, small wild clover, and eyebright, is that, he subjoins, which produces the finest wool. It is, indeed, a well-known fact, that wool always becomes coarse, though increased in weight, from sheep being fed on strong land. Hence it is that a Southdown ewe produces a fleece full a third heavier, though much coarser, the year she is fattened, than any one that preceded it.

SYMPTOMS AND PROGRESS OF THE ROT IN SHEEP.

By an experienced Flock-master.

In the first stage of the rot, a sheep is in the frequent habit of rubbing the under lip against the fold, or its own fore legs, or any other hard substance; also of drinking a greater quantity of water when at the sheepfold than those that are sound, and showing a disposition rather to lick off the moisture from, than to crop the grass. In the second stage, the lips. nostrils, and throat, become swoln; the animal is feverish, insatiably thirsty, and almost incessantly visited by a sort of dry cough. In the third and last stage, the eyes become sunken; the eye-veins, small, discoloured, and nearly bloodless; the eye-balls livid and dim, with whites exceedingly pale, the burrs of the ears swoln, and free from wax; the liver, lights, and throat ulcerated; and the passage of respiration being stopped, the animal is suffocated. "I was led to this experience," says the writer, "when very young in business, by an old shepherd who had been more than forty years upon the farm. Pointing to a sheep rubbing its lip against the fold, and acting otherwise in the manner above described, 'That sheep, master,' said he, 'is touched with the rot 'The best thing I can recommend you to do with him is, to take him home, before he is too far gone, give him some ground oats, and make him tidyish meat, and kill him.' I did so, as sheep will thrive upon oats for sometime after they are first affected; and when the sheep was opened, I discovered that its liver was full of things resembling plaice, and its lights just beginning to become ulcerated. The next sheep I found in the first stage as above mentioned, I suffered, by way of experiment, to take its chance, and it died, by suffocation, in the third stage, as above stated, which was the result of *at least* a dozen experiments."

SHEEP ROT.

The season of the year in which, according to the pretty general opinion of flock-masters, sheep are most likely to take the rot, being at hand, viz that in which the Michaelmas fogs produce gossamer. and the juices of the earth small white snails, both of which sheep have been known to devour with the greatest degree of voracity, and to fall with the destructive malady shortly afterwards; the following *recipe*, lately found among the papers of a deceased Gloucestershire farmer, may not be unacceptable to a portion of our readers:—"If your sheep be infected with the rot," says the *recipe*, "which you may discern by the colour of their eyes, pen them up in a barn, or large sheep-cot, set about with wooden troughs, and therein feed them with clean oats for a day or two; then put amongst the oats a small quantity of well-steeped bay-salt, and afterwards a greater quantity, till such time as they begin to disrelish it; then give them clean oats another day or two, and afterwards oats mixed with salt as before. This course being followed, their eyes will recover their natural colour, and they will be perfectly cured. If the water set for them to drink be a little impregnated with bay-salt, it will be none the worse." The *recipe* says nothing about hay, but, doubtless, a little of the best quality should be given. The writer, having no further knowledge of the above *nostrum*, merely gives it *verbatim*, as it was handed to him; but, as it may be efficacious, and the dung produced by its administration would defray every expense, (though it was ever, and still is, his opinion, that the best remedy for a sheep touched with the rot is a butcher's knife, especially if it has any meat about it;) the experiment may be worth trying.

NORTH-BORDER SHEEP.

Mr. Christie, an indigo merchant, of Mark-lane has, according to Smithfield chit chat, of this (Friday) morning, recently *flocked* an estate, which he a short time ago purchased in the mountainous part of Wales, with 2,700 of the *North-border*, or *Cheviot Hills Ewes*, which, on account of their coming to a much greater weight, and standing the winter much better than their own breed of sheep, are said to have become great favourites with the Welch farmers. The wethers bred from them, when well fattened, weigh from 8 st. 4 lbs. to 10 st. each; and the ewes themselves are said to be so hardy as to do well on the Cheviot Hills without fodder, and even in the deepest snow, provided there be any herbage beneath it for them to eat, through the severest winter. They are milked by the Northumberland farmers, yielding about a pint of milk each per day; which milk makes excellent butter and cheese from early in August, at which time their lambs are weaned, till the latter end of September, or till within a week of the rams being turned among them.

SMALL POX AMONG SHEEP.

The Grand Duke of Schwerin has published an ordinance for the vaccination of the sheep in certain districts of his dominions, because they are infected with the *small pox*, and the contagion is spreading about Crahon and Krivitz. The vaccinated sheep are to be separated from those which have taken the small pox naturally, till the vaccination is complete. The sheep which die are to be buried at least three feet below the surface of the ground; the infected sheep are to be kept at least 500 paces distant from those not diseased; and the shepherds are ordered not to quit their flocks, and not to allow any strangers to come near them. [*French paper.*

BEES

May be kept in health, and preserved during the winter, by providing them with salt in a diluted form, mixed with treacle and water. It should not be given to them in its crystalized state, (for bees have not the power of feeding on it, till it is dissolved, or very finely pulverized.) but in a weak solution of four or five ounces to a gallon of spring water. In this state, it is a preservative against dysentery, the malady which is the most frequent and dangerous to these very interesting and valuable animals.

PROSPECT OF CROPS.

EXTRACT OF A LETTER—DATED

Cahaba, Alabama, Nov. 2d, 1825.

"Upon my return home, a few days since, from a visit to my friends in South Carolina, I find, after the most flattering prospects, until the 1st of September, our cotton crops have been cut short by the worm and rot. Many of us have not made half crops, and with the present prices, our only course, to be *independent*, is to practise that great virtue, *true* economy."

LADIES' DEPARTMENT.

THE NURSERY.

From "A Treatise on the Physical and Medical Treatment of Children," by Dr. Wm. P. Dewees.

Every body, almost, in easy circumstances, has a part of the house appropriated to what is called the "nursery." The part selected for this important office, is generally, or at least too often, the most exceptionable part of the building. It is usually selected from the other rooms, because it is "handy," or because it is the only one that can be spared; without the smallest attention being paid to its fitness for the purpose for which it is designed.

The room selected for the purposes of a nursery, should have every advantage which space or location can give, when these can be commanded. We shall therefore say in what a well appointed nursery should consist, leaving it, of course, to the ability of every individual to approach it, as nearly as circumstances may permit.

The nursery should be spacious, with a high ceiling, and perfectly dry; that is, it should not be exposed to the operation of any cause that may render it damp: as on a ground floor—too much shaded by trees—or placed beyond the occasional influence of the sun. Its windows should be tight, and the walls dry; the floor should be of wood that will quickly dry, after being wetted for the purposes of cleanliness; but the utmost care should be taken not to hasten this process, by placing ignited charcoal in its centre. Serious mischief has frequently been done by this absurd and dangerous practice.

It should be so situated, that the door or doors shall not open immediately on staircases—or should this unavoidably be the case, the heads of the stairs should be secured by latticed half-doors, and these so constructed, by having their slats placed perpendicularly, that the children cannot climb upon them, and thus defeat their object.

The windows should have cross-bars placed before them; they may be five inches distant from each other, that the windows may be opened for the purposes of ventilation or air, without apprehension, and without danger of accident to the child. They should have shutters, that the room may be darkened, when the abstraction of light becomes necessary. The windows should not have curtains of a glaring colour, as the light will be increased thereby, and prove injurious to the eyes of young children.

If possible, the nursery should consist of two rooms, opening into each other. This would yield very great advantages; the children could retire to one, while the other was ventitating or getting cleaned, by washing or sweeping; which would contribute greatly to their comfort, as well as to their health. They would also be removed from the dangers of damp, the inconvenience of dust, the risks from a cold stream of air, while the room is drying or sweeping, besides having an enlarged space for the exercise of their limbs. In a space so extensive as this, they could improve their strength by engaging in many little sports, which children are so ingenious to devise, when they cannot, from the condition of the weather, take exercise in the open air.

Besides, such an arrangement will permit the children to have a room fresh and sweet in the morning, after having rendered the other foul by sleeping in it. This is an advantage which has been but little attended to, notwithstanding its obvious utility, especially to the younger children, who cannot always escape into the fresh air in other parts of the house.

Carpets in cold weather are decidedly useful, if they be properly managed; that is, well shook and aired every week. By this means, the dust is removed from them, and they have the advantage of becoming dry by exposure. We are sensible that several objections may be raised against carpeting a nursery: as the great quantity of dust they accumulate—their becoming often wet, without the chance of drying—their retaining grease so fixedly as not to be removed—their absorbing, and then giving out a variety of impurities, &c. But notwithstanding all these reasonable objections, we are persuaded, that one single advantage which they possess in a nursery, overbalances all that may be said against them—namely, their protecting the heads and limbs of children from injury when they fall.

The elastic material (wool,) of which the carpet is formed, is well calculated to break the force of the blow which the head or limbs of the child receive, when it falls upon it; so much so is this the case, that we have not known a single instance of serious injury from falls upon them. We are sure to have our anxiety diminished, when called to a child who has received a blow on the head from a fall, when we are informed it fell upon a carpet. We are therefore of opinion, that when the child falls from a moderate height, it will rarely, if ever, suffer a serious injury from it. This certainly would not be the case, did the child fall upon the naked floor.

We must, however, be understood to recommend carpets in cold weather only; for so soon as the weather becomes sufficiently warm to do without fire, the carpet should be removed, and its place supplied by an even, well stretched mat; or the floor may be left bare—for at this period, it is presumed, children will be but little confined to the nursery, unless the state of the weather prohibits their enjoying the open air. This state of weather may consist in its being too wet, too windy, or too hot.

The furniture of a nursery should be as little in quantity as convenience will permit, that the children may have the space that would be unnecessarily occupied by many articles, especially chairs and tables. It should, therefore, consist of the beds for the children and nurse—or we would rather say mattresses, as we are of opinion that feather beds should be driven from the nursery, for the following reasons: first, they are too warm for the purposes of the best health, especially with feeble children; accumulating so much heat as to unduly stimulate the whole circular system—thus giving rise to unnecessary, nay, injurious perspiration; second, the effluvium from feathers is extremely oppressive, particularly in warm weather, and to children of feeble lungs; third, they discharge a prodigious quantity of dust, intermixed with minute portions of down, occasioning cough and other inconveniences.

If it be objected, that mattresses are too cold in our climate for winter, we would immediately obviate it, by recommending the spreading of a blanket over the mattress, which will effectually remove the inconvenience complained of.

When practicable, children should sleep in separate beds, and these should be large—for it is injurious to have them cramped when they sleep, as well as indelicate to crowd opposite sexes together. Besides, the degree of heat generated by contact, will be certain to make them uncomfortable; they will throw off the bedclothes, and thus expose each other to colds.

Children should never have more bed clothes spread over them than is sufficient to maintain a proper degree of warmth—if more be put upon them, they become oppressed, or perspire, both of which should be avoided.

Should we not, however, succeed in establishing our objections against feather beds in winter, we are persuaded every body will agree in the use of mattresses during hot weather. Should these not be at command, the sacking-bottom, or even the floor, should be substituted—for almost any thing is preferable to feathers.

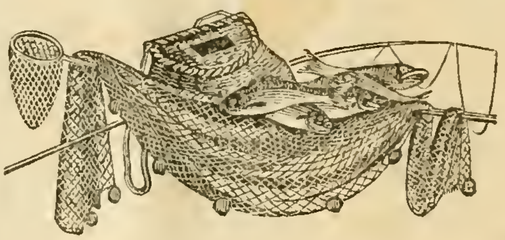
It is in the nursery, in a great measure, that the habit of early or late rising is generated This is a matter of much importance, and the greatest regularity should be observed, that a proper one is formed. Children should, therefore, retire at a regular, and sufficiently early hour, to insure their early getting up—for beyond a certain time, sleep is injurious. It would, however, be a little difficult to establish a positive rule upon this subject, as some children, like adults, will require more sleep than others. Children who exercise much, will need more sleep than those who exercise but little—consequently they should not be confined to precisely the same number of hours.

All children are disposed to be early risers. This propensity should therefore be cultivated, by permitting them to retire sufficiently early to bed—and after they are in bed, they should not be allowed to keep each other awake by playing, and thus depriving themselves of sleep, for the same reason, no noisy employment should be permitted in the nursery, that the children need not be disturbed. Indeed, it would be best, when children have attained their third year, or even before, that they should not be allowed even light in their rooms, that they need not unnecessarily be kept from sleep, as well as to prevent any apprehension from being left in the dark.

When children first awake in the morning, however early this may be, provided it be after daylight, they should be allowed to get up and be dressed—for if this be not done and they are forced to lay longer than is pleasant to themselves, they will become fretful and dissatisfied, or again fall to sleep. In either case a real evil is induced—in the first, the disposition of the child is injured; and in the second, a habit of lying too long is generated.

It should be carefully guarded against that no unnecessary habits are indulged in during the period set aside for sleep; such as drinking water several times in the night, or rising too often to discharge the contents of the bladder. If the first be indulged in, an artificial thirst will be created; if the second, the bladder acquires a preternatural degree of irritability, which is almost sure to terminate in the disgusting and inconvenient habit of wetting the bed. [*To be concluded.*]

MISCELLANEOUS.



[From a Boston paper.]

FISH.

Boston has been often mentioned, as among the places in the United States distinguished for fine fresh fish, and when we recollect her almost unfailing supply of fine cod and haddock, we can easily believe this boast is not wholly destitute of foundation. It is however a source of unpleasant reflection, often, to those whom kind nature has blessed with tender feelings as well as delicate *taste*, that their luxuries are sought on the ocean at periods of great inclemency, and at much hazard and suffering to the virtuous fisherman. What a melting consideration to the tender hearted lover of good eating, that the cod's head, at the sight of which not only his eyes but his mouth most bountifully waters, may have cost the life of a fellow man, and the briny tears of a widowed wife and of fatherless children? What a zest would be given to the pleasures of the eaters of fine fish, coold they have, by the ingenuity of man, finer fish than are now-a-days to be obtained, caught with as little hazard, as is now occasioned by driving the fatted ox to market, or transferring the well fed bleater to the hands of the butcher.

It was after a train of such reflectory, superinduced by a dinner of real Boston fried cod, that my good genius led me to the 38th number of the London Journal of Science, Literature, and the Arts, where I found an article "on the transportation of fish from salt to fresh water," accompanied with "a prospectus of a plan for preserving and rearing fish for the London market." You will perhaps do no disservice either to the edification or amusement of your numerous readers, by indulging me in a brief notice of this *transporting* subject.

The result of numerous experiments establishes the fact, that fish may be transported from salt to fresh water and vice versa, with great success, improving both the quality of its flavour and the increase of its species. The flavour, particularly, has been materially improved, in those fishes which have been subjected to experiment, and among those, in which this improvement has been conspicuous, are named the bass, the loach and the mullet. The domesticated pond fish of each of these species is much superior to the fish in its native ocean. The effect of transportation in improving oysters is notorious. The sole becomes twice as thick as a fish of the same length from the sea, and its skin also becomes extremely dark, or nearly black. The plaice increases very materially in thickness and loses its spots. The bass also grows much thicker and improves in delicacy. Crabs, prawns and loches have found their own way into ponds, and the effect of their new habitation has been to multiply to a great degree their numbers.

Perhaps when it is stated that philosophical analysis has detected in the economy of nature a feature, which when known would almost lead us to expect the result, which experience has established, your readers will be less disposed to laugh at my idea of fattening salt water fish in fresh water ponds. It is said that oxygen is much more easily disengaged from fresh than salt water. Consequently the act of respiration must be easier in the former than in the latter: and therefore, so far from presuming, as has been done, that sea fish cannot respire fresh water, the conclusion would be that they would respire fresh water with greater facility, in the same manner that warm blooded animals respire more freely in an atmosphere highly charged with oxygen.

It may then be considered a result, attested both by observation and experiment, that sea fish will live and thrive and also breed, in ponds and enclosures; and with regard to many, it also appears that it is indifferent whether the water is salt, or fresh or brackish, or whether it be alternately fresh and salt. It also follows, that if necessary, they may be fed in enclosures, as are domestic animals; or what would be easier by placing enough of different species together, they would feed each other without further care. I have already stated that the flavour of most species of fish is much improved by this *stall-feeding*.

The operation of these considerations on those who are engaged in supplying a large fish market must at once be perceived. How often are fine fish spoiled before they can reach the market? How often by violence of weather is the lover of good fish obliged to wander through vacant stalls? Is he not, sometimes at least, obliged to turn from the pursuit of that prince of fine fish, the cod, "to prey on" such stuff as Brighton never fails to supply, let the skies be ever so unkind or Boreas ever so noisy?

Now by *stall-feeding* fishes besides improving their quality, a regular supply would be insured. We should always have first and always good. It would make the same quality and kind of fish always worth its market price, securing the grower from a glut and the consumer from a scarcity. Would that I had the pen of Adam Smith, or of Ricardo, to pourtray in all its beauty this nice adaptation of supply to demand.

And then for its effect upon that never-to-be-too-much-admired class of men, the fishermen!—Who can doubt that the single operation of making supply sure would produce a much augmented demand? The fisheries would thus be increased, while the temptation of a great and unnatural price would nenever lure the too venturous fisher to an untimely grave. Our sensibilities would never be awakened at the sight of a cod's head or halibut's tail, because we should no longer associate with them the perils of the mighty deep. We should no longer imagine the fisherman, in his frail bark, tempest tost, seeking his livelihood in despite of cold and storm, because he would have only to go to his quiet little pond and draw upon his reserved stock, until kindlier skies should invite him to renew a now perilous toil.

And too, who will not admire in this age of internal improvement, the bright idea of making our numerous ponds to teem with the riches of the Banks of Newfoundland? Is there not to be found among us, some aspiring genius, some Cape Cod De Witt Clinton, who fired with this novel idea, shall first transport a family of cods and codlings, say to Shrewsbury pond, and swim to immortality as the founder of the "Worcester County Cod Fishery?" Or perhaps, some one of the sons of Nantucket, whose playthings are the monsters of the deep, transported with the idea of transporting a *calf* or two to the great inland seas of America, may enable the future whale-men of Nantucket to seek their noble game, not round Cape Horn but through the Erie canal. Laugh not, gentle reader, in this age of wonders, at any thing for its extravagance. It is not more incredible now that the cod fishery may be fifty years hence pursued in Worcester county, or that we may "go a whaling" in canal boats, than it was fifty years ago that the ocean would be crossed by the power of steam against wind and tide.

I intended to have given you some account of what has been done in England in the *fish feeding* line, as well as what was before done in the like line by the luxurious Romans. But I will reserve this part of my notice of the essay in the London Philosophical Work to a future day. You have, for the present, had enough of the *fish story*. AQUA.

SINGULAR CASE OF RESUSCITATION.

The following singular circumstance lately occurred at St. Petersburg:—"Two gentlemen had contracted a bitter and irreconcileable enmity against each other. A servant of one happening to die, was buried within twenty-four hours, after the Russian custom, when the other determined to gratify his revenge upon his adversary, by accusing him of the murder of his man. To give a colour to this accusation, accompanied by some of his confidential servants, he proceeded privately to disinter the corpse, with a view of inflicting marks of violence upon it. The body was removed from the coffin and held erect, that it might undergo a severe flogging, when, to the astonishment and dismay of the party, after a few blows had been inflicted, animation returned, and the affrighted resurrection-men ran off with the utmost precipitation. The corpse at length recovering its animation, was enabled to move off in its shroud and regain its master's habitation, which it entered, to the great terror of its respective inhabitants. At length, however, his reality becoming certain, they were re-assured, and the supposed ghost communicated all he could remember of the state he had been in, which was, that his senses had not left him, notwithstanding he had felt so cold and torpid as to be incapable of speech or motion, until the blows had restored him. This led to the detection of the diabolical plan against his master's life and character. The servants of the monster confessed their participation in the act, and he was consequently arraigned before the senate."

A ROARER.

In answer to an inquiry made by Mr. Wilson, of Bildeston, a few years ago, Mr. Cline, the eminent surgeon, informed him that the disorder in a horse which constituted a *roarer* was caused by a membranous projection in a part of the windpipe, and was a consequence of that part having been inflamed from a cold, and injudiciously treated. A roarer was not therefore a diseased horse, for his lungs and every other part might be perfectly sound; but when a horse was in strong action his breathing became proportionably quickened, and the air, in passing rapidly through the windpipe, was in some degree interrupted in its course, and thus the roaring noise was produced. The existence of this in a stallion could not be of any consequence. It could not be propagated any more than a broken bone or any other accident. *English pa.*

EXTRAORDINARY PRODUCTION.

The farmers in the vicinity of Kingsbridge, have been greatly interested during this harvest, by an extraordinary production of wheat grown in the garden of Mr Mordaunt, of Read, in the parish of Loddeswell; one corn only has produced 46 stalks of wheat, bearing in the whole 2,000 grains of corn. The interest excited induced the agricultural connoisseurs to make close inspections in the root, to ascertain whether or not any of the feathered race might have dropped additional corns, and they seem to prove the whole 46 stalks to be the branches of *one seed* alone. [*English pa.*

SPORTING OLIO.

On the Length of Gun Barrels.

Frederick County, Md., 22d Nov. 1825.

Mr. Skinner,

I must beg leave to state that I have never doubted the practicability of our friend's shooting "the bullet through the blade of the broad axe"—but presuming that, as he wished to establish the superiority of his gun, by publishing the fact, I think it would have been but fair in him to have given us some idea of the thickness of the axe.

In support of my opinion, already advanced, on the "length of gun barrels," I now state, briefly as possible, my reasons.

We know the fact, that the velocity of a single ball is greater than more, fired from any barrel—and that if a ball is well fitted to the axis of the piece, it requires but a very short barrel, indeed, to enable the elastic fluid to act upon it with its greatest power, and to give the ball its proper direction. It follows, of course, that in shooting shot, as the velocity and resistance is diminished, so must the instantaneous impulse of the powder; and it evidently requires a greater length of barrel to preserve the rectilinear direction of the shot. I defy any twenty-two inch barrel of the same calibre to throw as many shot, within a given space, at the distance of forty yards, as one of thirty or thirty-three inches long. Much also depends upon separating the powder completely from the shot, to shoot with certainty. The best plan I have ever tried, is to put the charge of shot into a cartridge, made of the best cartridge paper, well fitted to the cylinder of the barrel. These are worn in a belt buckled round the waist; there is no necessity of wadding between the powder and cartridge. It is astonishing how quick a gun may be loaded in this way. It effectually prevents the barrel from leading, and it may be fired fully twice as often without cleaning; but it is presumed that no gentleman will enter the field with a dirty gun. I am much hurried, and to save another post must ask indúlgence for my careless writing. Respectfully, your obed't serv't,

SAMUEL WOODCOCK.

P. S. Could you not, between this and Christmas, make up a pigeon match amongst our best shots, to ascertain whether we can cope with our transatlantic neighbours? I would recommend that there be no snow on the ground and the wind moderate.

[From the Warrenton Reporter.]

Virginia Race Horses.

The Virginia race horse is a descendant of the English race horse, occasionally crossed with the Arabian stock brought direct to America.

Janus, Medley, Bellair, Shark, Mark Anthony, Diomede, and Sir Archy, though not the only fine stallions which have produced capital racers, are considered as the best. Citizen, Bedford, Sir Harry, Saltram, Precipitate, Daredevil, and many other fine English stallions, such as Dion, Restless, Chariot, Magic, True Blue, Chance, Brian O Lynn, Cœur de Lion, &c., stood in the southern parts of Virginia and North Carolina.

The best Virginia racers have been for many years raised in North Carolina, and a few counties of Virginia lying between James river and Roanoke. Most of the capital race horses which within the last thirty years figured on the turf as Virginia racers, were actually foaled and raised in North Carolina. Collector, Snap Dragon, the Celor Gelding, the Medley Mare, which produced Miss Jefferson; Carolina, Roanoke, Carolinian, Vanity, and Reality. The Cele Mare, commonly known by the name of the Green Mare, which won twenty course races in succession, and was never beaten until she broke down, and her produce, Drummond's sorrel mare, Maria by Bay Yankey, Little Billey, and several others, Sir Charles, John Richards, Betsey Richards, Sir William, Henry, Shawnee, Sir Peyton, Vanity by Harwood, Stanley, Vantromp, Washington, Nancy Warren, Aggy Up, Aggy Down, Tickler, Thornton's Colt, Cooter-Snapper, Marion, Betsey Robinson, and countless others, of which Virginia has the credit abroad, were North Carolina horses. Fair Play, and Blank by Citizen, may be recollected by many as amongst the best horses of their day. *Our* cotton, *our* tobacco, and *our* race horses, are called by the name of Virginia; while our *ague and fever*, our *bad roads*, and our *bars and shoals*, are admitted, even by the Virginians themselves, to belong to North Carolina.

A Bit of a Jockey.

Partridge Shooting Match.

Three good shots went out on Monday morning, subscribing 50*l*. each, and the one who killed the most head of game by 12 o'clock, to receive the 150*l*. The parties were Mr. Briscoe, a known good shot of the Ashton Club, and Messrs. Clementson and Kemp. They started, in different directions, from Stoke, Bocks—and Mr. Briscoe bagged 62 head; Mr. Clementson 60; and Mr. Kemp 58. The whole together missed 19 shots. [*Eng. paper.*

POETRY.

HAME.

(FROM POEMS BY R. DOUGLAS.)

When the dove from the ark by the Patriarch was sent,
Still fluttering and circling, and fearing she went;
But brisk beat her pinions, as backward she came,
And straight was her course, for it led to her hame.

Around her the waters invitingly lay,
They flash'd to the sunbeam, and courted her stay;
Yet she turn'd her, nought lingering, the road that she came,
For all was unstable and cauld but her hame.

Oh hame! dearest hame, has or nature or art
A sound like that word, which gaes straight to the heart?
All grandeur, all glory, how tasteless, how tame,
To the sober delights of my ain quiet hame!

There my griefs, when I grieve, are patiently heard;
There my joys, when I joy, are kindlier shar'd;
In poortith, in wealth, in reproach, or in fame,
The dear smile of welcome ay waits me at hame!

THE FARMER.

Baltimore, Friday, December 2, 1825.

[We have received the pedigrees of Mr. Powel's cattle, imported in July and November, of the latter of which some mention was made in our last number, by the ship Algonquin; to whose captain and owners Messrs. Cope & Sons, he observes the agricultural community, are much indebted, for their extraordinary liberality and great exertions, to facilitate the introduction of live stock from Europe.]

The Neat Cattle consist of a two years old bull

Malcolm bred by Mr. Whitaker; by Enchanter, the sire of the Improved Short Horn bull Wharfdale, which beat the Herefords and Devons at Sir Charles Morgan's Show, and after beat the field, including Short Horns.

Western Lady, Malcolm's dam, is recorded in the Rev. Henry Berry's pamphlet,[*] as giving seven gallons of milk daily.

Yorkshire Belle, bred by the same; by Frederick, dam Yarm, recorded in the same pamphlet, as giving six gallons a day. Yorkshire Belle took *the first premium* in April last at the Otley Show, Yorkshire.

Desdemona, bred by the same; by Frederick, dam Delia, g. d. Red Daisy, recorded in the same pamphlet, as giving eight gallons per day.

Betty, bred by the same; by Alonzo, dam Wildair, recorded in the same pamphlet, as giving eight gallons per day—all wine measure. Mr. C. describes Betty's points as very extraordinary. Enchanter's g. d. was Old Daisy, stated to have given "sixteen quarts, ale measure, at a meal for months together."

Alonzo, the sire of Betty, was out of Red Daisy, noted above.

Belina, bred by the same; by Barmpton, dam by Son of Wellington.

Mr. Coates, who is one of the oldest breeders in England, and is the keeper of the Herd Book, selected Malcolm and all these heifers, and was not limited as to their price.

He observes—"I have made particular inquiry of "the Cow Keeper, who states that she, (Belina) "now gives upwards of four gallons of milk, wine "measure, at a meal, or eight gallons per day, which "is a great quantity for a heifer with her first calf."

Of the Bull, he remarks:—

"I have just returned out of the counties of Durham and Northumberland, where I called upon "most of the principal breeders. Candidly I confess, *I did not see any thing that I should like to use "in preference to Malcolm.* His dam, Western Lady, though at this time deep in milk is remarkably "fat, and I think, as useful a cow as is, for dairy and "breeding."

"Yorkshire Belle appears likely to be a great grazier, and being from a very good cow of the milking kind, I think she will also please you. She "would command a very great price, having already "obtained a premium."

"Desdemona. At present being young, I cannot "speak so decidedly of her; but from her size and "age, rumps, hips, loins, ribs and back, I never saw "one that pleased me better, as the back is very "broad, straight and strong."

He continues that he "considers Malcolm worth "an hundred and twenty guineas.

Mr. Coates has no connexion with the gentlemen by whom these animals were bred. He is noticed in Strickland's Survey of the East Riding of Yorkshire, page 223, "as an eminent breeder of cattle "and Leicester sheep," and as one of the early improvers, who had sold a bull (Patriot) for 500 guineas.

Mr. Whitaker refused to make the selections, but after they were made, declared that some of them were intended not to have left his farm, and objects to completing another order, saying, "I should have great pleasure indeed in sending you animals. I must confess, that I cannot, with due regard to myself, as a breeder, part with any more at present of my best "milking tribes." An experienced breeder describes "Western Lady as a superb cow, and a "great milker, combining perfection of both beef and "milk, more than any cow Mr. Whitaker has ever "had."

At the last Doncaster meeting it appears through the letter of a gentleman in Yorkshire, that Mr. Whitaker took the first prize at the great Cattle Show, beating with his cow Matilda, Mr. Champion's cows and others.

And it appears by a letter dated Herefordshire. July 10, 1825, in Mr. Powel's possession, that "Mr. "Whitaker's cow Millicent was the first Improved "Short Horn which beat the Herefords on their own "ground."

Mr. Powel has "no idea that *races* of cows can be "bred, which will in this climate, give quantities of "milk equal to those which are afforded, in the more "mild and moist climate of England;" and he wishes it to be understood that Mr. Whitaker cautiously abstains from praising his animals, and liberally proposes to Mr. Powel, if he should think those sent not worth the prices fixed by Mr. P's agent, to deduct 16 per cent. from the amount.

The statements in regard to milking are not given by him, but by Mr. Berry, who says, page 45, that the "instances which are given as to milk, were obtained by himself on the spot."

[Ed. Am. Far.

EXTRACT

From a letter dated Burley, Yorkshire, 6th September, 1825, relating to Mr. Powel's last importation of Sheep in addition to those received from England in May and August.

I am desired by Mr. Coates to say that the Leicester ram[*] is of good substance, remarkably fat on his back, with a fair quantity of wool, and weighs about 44 lbs. per quarter—altogether a good one. (I have had good judges to examine him, and they speak in great praise of him.) The ewe Mr. C. says, is neat in form, and shews much good breeding; but she is poor, having suckled two lambs. He could have had one of a larger size, but not so neat, preferring neatness to substance.

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[*] Improved Short Horns and their Pretensions. Liverpool, 1824.

[*] Died on the passage.

The Southdown ram is descended from the best flock in Sussex; his brother got a premium at Doncaster, and no better sheep than this. Mr. ——— would not let him choose an ewe from his flock, without paying an exorbitant price; but he says I don't regret it, as I was fortunate to meet with the *neatest Southdown I ever saw.* She was clipped in the last week in July, intending to shew her at Doncaster, but not being a subscriber, he did not choose to do it.

The Southdown ram was bred by George Saville Foljambe, Esq. of Osberton; the Southdown ewe by Mr. Hodgkinson of Killon. Mr. Coates paid Mr. Earnshaw, near Ferrybridge, fourteen guineas for a two year old Leicester ram.

☞ We take this occasion to repeat the request made some time since in this journal; and to which we are indebted for the foregoing pedigrees of some of Colonel Powel's imported stock; that gentlemen who keep races of improved animals for sale as breeders, would supply us with the pedigrees of their original stock, and of such as may be annually added to it, by propagation or purchase Every farmer who has animals worthy of being selected and reserved as propagators of their kind, should *name* them, and accurately note their ages and pedigree. Extracts from Stock Registers, thus furnished and recorded in the Farmer; would effectually constitute that department of it a "HERD BOOK," of authority for general reference, preventing impositions, giving greater value to the good, excluding the spurious, and serving effectually the fair purposes and laudable objects, of both venders and buyers.

A PENNSYLVANIA MANURE.—We wish to know of our agricultural correspondent, whether *lime* is used by any of them *extensively as a manure.* The question is put to us by a gentleman in Westchester, State of Pennsylvania, who tells us that "the extensively beneficial effects it has produced, and is producing *here*, (I might almost say the *wonderful effects*,) lead me earnestly to wish it may be more generally used." We are aware that marl is now introducing into the lower counties with very great effect: and that plaster of Paris has been for several years largely and beneficially employed; but we have not understood, that *lime* has been resorted to, although the valley west of James river, between the Blue Ridge and the Alleghany, and beyond the Alleghany, abounds with immense masses of the best *limestone.* The query seems to us to be so important, that we seize this opportunity of throwing it before the public. If Mr. Skinner would republish this hasty paragraph in his valuable "*American Farmer*," with a request to some of his correspondents to communicate the process of applying the lime, and in what quantities? he might, perhaps, render a substantial service to the great cause of agriculture. [*Richmond Enquirer.*

[On reading the above, with every feeling of gratitude for the kind terms in which our journal is mentioned, we felt a little mortified—because it affords grounds for presuming that our friends of the Enquirer have not read the American Farmer so regularly as we had thought *one* of them had; else he could not have failed to recollect, that it would be difficult now to put a question in regard to the burning, and various uses of *lime*, which has not been anticipated by the numerous *practical American* communications that *have been published* in the American Farmer, on that topick. In our next, we shall copy from the indexes to the late volumes, the numerous references to that subject—and in the mean time shall send numbers of the Farmer to the Editors of the Enquirer, containing papers which we procured from experienced farmers, with express reference to the district of Virginia mentioned by them—through which we once travelled, experiencing every where the most flattering and grateful hospitality from the citizens, and delight in contemplating all the evidences of great inherent fertility, and natural objects equally curious and wonderful.]

☞ As part of the proceedings of the society of the Shenandoah Valley, we have, with much pleasure, discovered in the report of the committee appointed to award the premium offered for the best cultivated farm, the statement of H. S. Turner, Esq. as to the management of his beautiful and productive "Wheatlands" estate, near Shenandoah Springs. The practical information it contains will enrich the next number of the American Farmer.

☞ WELL BROKEN AND GOOD RUNNING FOX HOUNDS WANTING.—Will the Editor of the American Farmer please to give notice in behalf of a gentleman well known to him, that a three-fourths blood Devon bull calf, or a pair of Bakewell lambs, will be given in exchange for 3 or 4 *good* fox hounds.

Items from late English papers received in exchange for the American Farmer.

Mr. Weddle, a master in the British navy, has lately penetrated 200 miles nearer the South pole, than any former navigator. After penetrating several barriers of ice, hitherto insuperable, he found an open sea within the Antarctic circle.

It will be seen that Captain Parry has returned after another unsuccessful attempt to get into the Polar sea. Appearances wore a favourable aspect until the Fury was wrecked, which obliged the Hecla to return. We imagine nothing further will be done until Captain Franklin returns.

COMMERCIAL RECORD.

The sales of cotton at Liverpool, the week ending Oct. 22d, consisted of about 12,000 bags, at the price of the preceding week. A letter of the 22d says—"We have again to day a good demand—not much less than 3000 bags have been sold, although we cannot quote American cottons any higher than yesterday. Brazils have advanced a little. On the whole, the feeling in the market continues favourable.—Ashes continue very dull. For tobacco of the new crop, there is a fair demand, and the prices generally are steady. Some new turpentine has been sold to day, at 10s. 6d. Our grain markets have not undergone any alteration of late, but have been rather looking down."

TOBACCO.—Amount of inspections in the state warehouses, during the last week—25 hhds.

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Address of James Barbour, Esq., President of the Agric. Soc'y of Albemarle, at their meeting in November—Premiums offered by the South Carolina Agric. Soc'y—Horses, Sheep, &c. in Missouri—Importation of Sheep into Albany—Holderness breed of Cattle—Premiums for singular objects at late Cattle Shows—Effect of change of soil on Wool—Symptoms and progress of the Rot in Sheep—North Border (Eng.) Sheep—Small Pox among Sheep—To preserve Bees in Winter—Prospect of Crops—The Nursery, Extract from a Treatise on the treatment of Children, by Dr. Wm. P. Dewees—On propagating Fish in Ponds—Singular case of Resuscitation—A Roarer—Extraordinary production of Wheat—On the length of Gun-barrels—Virginia Race Horses—Shooting Match—Poetry, Hame, by R. Douglas—Pedigrees of Mr. Powel's Cattle, &c.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	34	35		
COFFEE, Java, ...	—	18	19	22	25
Havana,	—	15½	17½	18	20
COTTON, Louisiana, &c.	—	18	20		
Georgia Upland, . . .	—	15	16		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33	34	37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	3 50	
Shad, trimmed,	—	6		7	
FLAXSEED, Rough, . .	bush	1 10	1 12		
FLOUR, Superfine, city,	bbl.	4 75	5 00	6 00	6 50
Extra . . . . do.	—	5 25			
Fine, ...	—	4 50	4 62		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	53	54		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	85	95		
do. Red, ...	—	90	95		
Buckwheat, ...	—	55	75		
Rye, ...	—	54	55		
Barley, ...	—	1 10	1 20		
Clover Seed, Red . .	—	5 00		5 50	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	bush	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36		
Peas, Black Eyed, . .	—	1 00		1 50	
Beans, White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	200			
HOPS, ...	lb.	27	29		
HOGS' LARD, ...	—	10		12	
LEATHER, Soal, best,	—	27	28		
MOLASSES, sugar-house	gal.	45			
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	1 87½			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2			
OIL, Whale, common, .	gal.	30			
Linseed, ...	—	90	95		
PORK, Baltimore Mess,	bbl	13 00	1350		
do. Prime, . . .	—	10 50		12 00	
PLASTER, cargo price,	ton.	5 37½			
RICE fresh, ...	lb.	3¼	4	6	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	5½	7½	9	10
WHISKEY, 1st proof, .	gal.	25	27½	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37½	50	
SUGARS, Havana White,	c.lb.	13 50		15 00	16 00
do. Brown, . .	—	11 00			
Louisiana, ...	—	10 00	11 00	11 50	12 50
Loaf, ...	lb.	19	22	20	22
Lump, ...	—	16	18	19	
SPICES, Cloves, ...	—	80		1 00	
Ginger, Ground, . . .	—	7		10	
Pepper, ...	—	18		25	
SALT, St. Ubes, ...	bush	42	45		
Ground Alum, . . .	—	50		62	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 25		
Lisbon, ...	—	1 20	1 25	1 50	1 75
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOY, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

Dear Sir, *Philadelphia county, Nov. 29, 1825.*

As you formally requested to be furnished with the pedigrees of improved races of farm stock, throughout the country, with a view to their record in the American Farmer, I beg leave to trouble you with such of those belonging to members of the Pennsylvania Agricultural Society, as, through certificates and documents placed in my hands, I have been enabled to trace. This duty has officially devolved upon me, as premiums being offered by the Society, for specific races, it becomes necessary in awarding them, to have reference to purity of blood, as well as excellence of form.

It is further desirable that such a record should be made, as the extensive circulation of your valuable journal, would afford to gentlemen at a distance, when about to estimate the value of stock of improved breeds, authentic means to ascertain their claims through the blood upon which their pretensions are founded.

It is to be understood, that a pedigree is never admitted, unless it can be traced, in the Herd Book, or the NAME OF THE BREEDER be given.

Very respectfully, yours,
JOHN P. MILNOR,
Recording Sec'ry Penn. Agric. Soc'ty.

J. S. Skinner, Esq.

PEDIGREES

Of Mr. Powel's Improved Durham Short Horns; derived from the best animals possessed by J. Whitaker, Esq. of Burley, Yorkshire, J. C. Curwen, Esq. of Cumberland, Mr. John Wetherell of Kirkby, Leicestershire, and Mr. Charles Champion of Bawtry, Nottinghamshire, England.

Malcolm imported in 1825,

bred by Mr. Whitaker, calved 1823, got by Enchanter, dam Western Lady, by Western Comet; g. d. by Western Comet; g. g. d. by Western Comet; g. g. g. d. by Western Comet; g. g. g. g. d. Haughton. Herd Book.

Western Comet, bred by Mr. Charge, got by Mr. C. Colling's Major, dam Gentle Kitty, by Mr. Charge's Grey Bull; g. d. by Favorite Herd Book.

Major, by Comet, (sold for 1000 guineas,) dam Lady (sold for 206 guineas at 14 years,) by grandson of Bolingbroke; g. d. Phœnix by Foljambe; g. g. d. Favorite, bred by Mr. Maynard, by R. Alcock's bull. Herd Book.

Favorite, the sire of Comet, by Bolingbroke, dam Phœnix by Foljambe; g. d. Favorite by R. Alcock's Bull; g. g. d. by Smith's Bull; g. g. g. d. by Jolly's Bull.

Grey Bull, by the White Bull, dam own sister to Red Rose's dam. Herd Book 406.

White Bull, by Favorite. Herd Book 55.

Grandson of Bolingbroke, bred by C. Colling, got by O'Callaghan's Son of Bolingbroke, dam Old Johanna, by Colling's Lame Bill Herd Book.

Foljambe, white, with a few red spots, calved in 1787, (bred by C. Colling,) by Richard Baker's Bull, dam Haughton, (bred by Alexander Hall,) by Hubback. Herd Book.

Hubback, calved in 1777, (bred by John Hunter,) by Snowdon's Bull, dam from Sir James Pennyman's stock, which were from Sir William St. Quintin's stock. Herd Book

Snowdon's Bull, by Robson's Bill, (bred by Mr. Wastell near Darlington,) dam Wastell's roan Cow. Herd Book.

Robson's Bull, by Masterman's Bull. Herd Book.

Masterman's Bull, by the Studley Bull, (bred by Mr. Sharter of Chilton.) Herd Book.

Haughton, (the g. g. g. g. g. g. d. of Mr. Powel's Malcolm,) bred by Alexander Hall near Darlington, got by Hubback; her dam by a Bull of the late Mr. Charles Colling, which he bought of Mr. John Bamlet; g. d. by Mr. Wastell's Bull; g. g. d. Tripes, bred by Mr. Pickering. Herd Book 330. Haughton was the dam of Foljambe.

Enchanter, the sire of Mr. Powel's Malcolm, Herd Book 53, light grizzle, bred by Mr. T. Bates; got by His Grace; dam Fairy bred by Mr. Hustler, by Duke; g. d. Old Daisy, by Favorite, the sire of Comet; g. g. d. by Punch; g. g. g. d. by Hubback.

His Grace, bred by Mr. Bates, got by Ketton the second; dam Dutchess second, by Ketton the first; g d. Dutchess first, bred by C. Colling, by Comet; g. g. d. by Favorite; g. g. g. d. by Daisy Bull; g. g. g. g. d. by Favorite; g. g. g. g. g. d. by Hubback; g. g. g. g. g. g. d. by James Brown's Red Bull. Herd Book.

Duke, by Comet, dam Dutchess by Favorite; g. d. by Daisy; g. g. d. by Favorite; g. g. g. d. by Hubback; g. g. g. g d. by James Brown's Red Bull. Herd Book.

Punch, bred by R. Colling, by Broken Horn, dam by ditto; g. d. bred by George Best of Mansfield. Herd Book.

Betty imported in 1825,

bred by Mr. Whitaker, calved in 1823; by Alonzo, dam Wildair, Herd Book 556, by R. Colling's Meteor; g. d. by Yarborough; g. g. d. by Styford; g. g. g. d. by Hutton's Bull; from James Brown's Bull. Herd Book.

Meteor, bred by R. Colling; by Comet, dam Diana by Favorite; g d. Old Wildair by Favorite; g. g. d. by Ben; g. g. g. d. by Hubback; g. g. g. g d. by Snowdon's Bull; g. g. g. g. g. d. by Sir James Pennyman's Bull. Herd Book.

Yarborough, bred by C. Colling, got by Cupid; dam by Favorite; g. d. by Hubback. Herd Book.

Styford, bred by R. Colling, got by Favorite, dam by Punch; g. d. by Foljambe; g. g. d. by Hubback. Herd Book.

Ben, bred by R. Colling, by Punch; dam by Foljambe; g. d. by Hubback. Herd Book.

Alonzo, Herd Book 7, calved in 1821, got by Bates' Cleveland, dam Red Daisy, bred by Mr. Hustler, by R. Colling's Major; g. d. by Windsor; g. g. d Old Daisy by Favorite; g. g. g. d. by Punch; g. g. g. g. d. by Hubback. Herd Book.

Cleveland, bred by C. Colling, got by Favorite, dam by Punch; g. d. by Bolingbroke. Herd Book.

R. Colling's Major, got by Wellington, dam by Phenomenon, g. d. by Favorite; g. g. d. by Favorite. Herd Book.

Windsor, bred by Charles Colling, got by Favorite, dam Venus, by Ben: g. d. Phœnix by Foljambe; g. g d. Favorite by R. Alcock's Bull; g. g. g d. by Smith's Bull; g. g. g. g. d. Strawberry by Jolly's Bull. Herd Book.

Belina imported in 1825,

bred by J. Whitaker, Esquire, calved in 1822; by Barmpton, Herd Book 13; dam by Son of Wellington, out of Charlotte, Herd Book 145; g. d. by Laird, &c

Barmpton, bred by Mr R. Colling; got by George, dam Moss Rose, by Favorite; g. d. Red Rose, by Favorite; g. g d. by Punch; g. g. g. d by Foljambe; g. g. g. g. d. by Hubback. Herd Book.

Laird, by Chieftain, Herd Book 29; dam Old Dotchess by Daisy Bull; g. d. by Favorite, Herd Book 55; g. g d. by Hubback; g. g. g. d. by Brown's Old Red Bull. Herd Book.

Yorkshire Belle imported in 1825,

bred by J. Whitaker (gained the first premium at the Otley Show, for the best yearling) calved in 1824; by Frederick, Herd Book 574, dam Yarm, 560, by Symmetry; g. d. by R. Colling's Meteor, Herd Book 93; g. g. d. by Windsor 148; g. g. g. d. by Grey Bull.

Grey Bull (See Malcolm's pedigree.)

Frederick, Herd Book 58, roan bred by Mr. Charge, got by Hutton, dam Orbit by Comet; g. d. Splendor by Comet; g. g d. Flecked Twin by Major; g. g. g. d. Red Simmone by Favorite; g. g. g. g. d. Flecked Simmone by Bartle; g. g. g. g. g. d. Old Simmone, descended from the Studley Bull. Herd Book.

Desdemona imported in 1825,

bred by J. Whitaker, Esquire, calved in 1824; by Frederick, dam Delia by Cleveland, (Herd Book 81) g. d. Red Daisy by Major, (Herd Book 86) g g. d. by Windsor, (Herd Book 148) g. g. g d. by Favorite (Herd Book 55) g g. g. g d. by Punch (Herd Book 115) g. g. g. g. g. d. by Hubback.

Frederick, (See Yorkshire Belle's pedigree.)

Cleveland, (See Alonzo's pedigree.)

Wye Comet,

begotten in England, by Blaize, dam White Rose by Warrior; g. d. by Mr. Mason's Charles; g. g. d. by Prince; g. g. g. d. by Neswick. Herd Book.

Warrior, by R. Colling's Wellington; dam by George; g. d. Diana by Favorite; g. g. d. Wildair by Favorite; g. g. g. d. by Ben; g. g g. g. d. by Hubback; g. g. g. g. g. d. by Snowdon's Bull; g. g. g. g. g. g. d. by Sir James Pennyman's Bull. Herd Book.

Charles by Pope, dam Cora, by Chilton; g. d. Marcia by Simon; g. g. d. Gaudy by Favorite; g. g. g. d. by Bolingbroke; g. g. g. g. d. by Foljambe; g. g g. g g. d. by Hubback; g. g. g. g. g g. d. bred by Mr. Maynard. Charles was hired by Mr. Champion and Col. Mellish, at 450 guineas for 2 years. Herd Book.

Pope by St John, dam Bright Eyes by Favorite; g. d. Lily by Favorite; g. g. d by Dalton Duke; g. g. g. d. by Alcock's Bull. Herd Book.

Chilton (bred by Mr. Mason) by Favorite; g. d. by Dalton Duke; g g. d. by Alcock's Bull. Herd Book.

Simon by Favorite; dam by Punch; g. d. by Bolingbroke. Herd Book.

Favorite, by Bolingbroke; dam Phœnix, by Foljambe; g. d. by Alcock's Bull; g g. d. by Smith's Bull; g. g. g d. by Jolly's Bull. Herd Book.

Blaize by Blyth Comet; dam Crimson by Patriot; g. d Young Milbank by Driffield; g g. d. Milbank, by Mr. Christopher Holmes' Bull. Herd Book.

Blyth Comet, by Comet, dam Magdalene, (bred by Mr. C. Colling) by Comet; g. d. by Washington. Herd Book.

Stately imported in 1822,

bred by Mr. Wetherell, calved 1821; by North Star; dam Susan by Denton; g. d. Selina, by Wellington; g. g. d. by Danby. Herd Book.

North Star by Comet; dam Lady by Mr. Mason's Baronet; g. d. by Cripple; g. g. d. by Irishman. Herd Book.

Denton, by Comet; dam Young Red Rose, by St. John; g. d. by Trunnell; g. g. d. by Danby. Herd Book.

Wellington, bred by Mr. Wetherell, by St. John; dam by Trunnell; g. d. by Danby. Herd Book.

Danby by Paddock; dam by White Bull. Herd Book.

Baronet by Chilton, dam Lydia by Favorite; g d. Nell by White Bull; g. g. d. Fortune, bred by Charles Colling, by Bolingbroke; g. g. g. d. by

Foljambe; g. g. g. d. by Hubback; g. g. g. g. g. d. bred by Mr. Maynard. Herd Book.
Irishman, bred by Mr Mason, by Styford, dam Fortune, bred by Mr. C. Colling. Herd Book.
Trunnell, bred by Mr. Mason, by Favorite, dam Fortune. Herd Book.

Lady

(imported 1821) by Grandson of Ossian; dam by Wellington.
Ossian by Comet.
Wellington by Comet.

Lucy

begotten in England by Wynyard, calved April 1825; dam Lady.
Wynyard, by Young Wellington. Herd Book.
Young Wellington, by Mr Gibson's Wellington; dam Sky Lark by Favorite. Herd Book.

Shepherdess imported 1822,

(bred by Mr. Champion) by Magnet; dam by Prince; g. d. by the Duke of Leeds' Bull.
Magnet, by Warrior, dam Magdalene (bred by C. Colling) by Comet; g. d. by Washington. Herd Book.
Warrior, by R. Colling's Wellington, dam by George; g. d. Diana by Favorite; g. g. d. Wildair, by Favorite; g. g. g. d. by Ben; g. g. g. g. d. by Hubback; g. g. g. g. g. d. by Snowden's Bull; g. g. g. g. g. g. d. by Sir James Pennyman's Bull. Herd Book.

Romp

by Bishop, calved May 31st, 1825; dam Shepherdess by Magnet; g. d. by Prince; g. g. d. by the Duke of Leeds' Bull, bred by Sir George Strickland.
Magnet (See Shepherdess' pedigree.)

Lydia

calved October 1824, by Bishop; dam by Denton; g. d. an imported cow.

Margaret

calved January 1825, by Bishop; dam Fairy by Young Denton; g. d. Prize, by Young Denton; g. g. d. by Bughorn.

Coquette

calved February 1824, by Bishop; dam Fairy by Young Denton; g. d. Prize by Young Denton; g. g. d. Bughorn.

Fairy

calved 1821, by Denton; dam Prize; g. d. Bughorn.

Virginia

calved 1821, begotten by General; dam Rosemary (bred by J. C. Corwen, Esquire) by Flash; g. d. Red Rose by Petrarch; g. g d. by Alexander; g. g. g. d. by Traveller; g. g. g. g. d. by Son of Bolingbroke. Herd Book.
General, by Young Star; dam Queen by Bruce; g. d. Empress by Western Comet; g. g. d Bright Eyes by Marquis; g. g g. d. by Simon; g. g. g. g. d. by Traveller; g. g g. g. g. d. by Colling's Lame Bull. Herd Book.
Flash (bred by Mr. Seymour) by C. Colling's Sir Dimple; dam Carnation (bred by Mr. Seymour) by Cripple; g. d. Moss Rose by Henry; g g. d. Rosebud, by Misfortune; g. g. g. d. Red Rose by Favorite; g. g. g. g. d. by Bolingbroke. Herd Book.
Petrarch (bred by Charles Colling) by Comet; dam Venus by Ben; g. d. Phœnix by Foljambe; g. g. d. Favorite by R. Alcock's Bull; g. g. g. d. by Mr. Jacob Smith's Bull; g. g. g. g. d. Strawberry by Mr. Jolly's Bull. Herd Book.
Alexander (bred by Charles Colling) by Favorite. Herd Book.
Traveller, by Bolingbroke; dam Old Blossom. Herd Book.
Son of Bolingbroke, by Bolingbroke. Herd Book.
Young Star, by C. Colling's North Star; dam Mary (bred by C. Colling) by Favorite; g. d. Venus by Ben. Herd Book.
Bruce, by Jupiter; dam Rola. Herd Book.
Western Comet, by C. Colling's Major, dam Gentle Kitty, by Charge's Grey Bull; g. d. by Favorite. Herd Book.
Marquis, by Petrarch, dam by Daisy; g. d by Favorite; g. g. d. by Hubback. Herd Book.
Simon, by Favorite, dam by Punch; g. d. by Bolingbroke. Herd Book.
C. Colling's Lame Bull, got by Mr. James Brown's White Bull. Herd Book
Sir Dimple, (bred by Mr. C. Colling,) by Comet, dam Daisy, by Grandson of Favorite; g. d. Old Daisy by Favorite; g. g d. by Punch; g. g. g. d. by Hubback. Herd Book.
Cripple, (bred by Mr. Mason,) by Irishman, dam Fortune, (bred by C. Colling) by Bolingbroke; g. d. by Foljambe; g. g d. by Hubback; g. g. g. d. bred by Mr. Maynard. Herd Book.
Henry, (bred by Mr. Mason,) by St. John, dam Dandy by Favorite; g. d. Lily by Favorite; g. g d. Miss Lax, (bred by Mr. Maynard,) by Dalton Duke; g. g. g. d. Lady Maynard, by Mr. R. Alcock's Bull. Herd Book.
Misfortune, by Favorite. Herd Book.

Ohio calved 20th March, 1825,

by Wye Comet, dam Virginia. (See Wye Comet and Virginia's pedigree.)

Raymond calved August, 1825,

by Wye Comet, dam Stately.
(See Wye Comet's and Stately's pedigree.)

Warwick calved October 27, 1825,

by Wye Comet, dam the imported cow Belle.

Harry calved 25th September, 1825,

by Wye Comet, dam Julia by Denton; g. d. an imported cow.

[Communicated for the American Farmer.]

PENNSYLVANIA AGRICULTURAL SOCIETY.

QUARTERLY MEETING.

The Society met in their hall, the following members being present:

Jonathan Roberts, John Hare Powel, Richard B. Jones. Manuel Eyre, John G. Watmough, James Worth, Stephen Duncan, Reuben Haines, John Willcox, Jacob S. Waln, Thomas Morris, Dr. Hare, Michael Newbold, Wm. Mason Walmsley, Thomas Landreth, Jonathan Thomas, Benjamin Serrill, G. W. Sargeant, Charles J. Davis, Aaron Clement, Mordecai R. Moore, and John P. Milnor. Visitors, Dr. Tidyman and Colonel Alston, of South Carolina.

The president in the chair.

William M'Clure, Esq. presented to the Society, through Mr. Haines, "Michaux's American Sylva."

The following gentlemen were elected resident or honorary members:

Resident Members.—Dr. Gibson, Lloyd Jones, James Thornton, of Philadelphia county.—Anthony Taylor, of Bucks county.

Honorary Members.—Harmar Denny, William Marks, James Todd, William Wilkins, and Thomas Burnside, Esqrs. of Pennsylvania.—Robert Oliver and Edward Lloyd, Esqrs. of Maryland.—Samuel W. Pomeroy, Josiah Quincy, and John Lowell, Esqrs. of Massachusetts.—Dr. Elmer, Col. Johnston, and Miles Smith, Esq. of New Jersey.—Richard K. Meade. Esq. of Virginia.—E. Dupont, and Caleb Kirk, Esqrs. of Delaware.—William B. Seabrook, Esq. of South Carolina.—J Whitaker, Esq. of Burley; Major Rudd, of Marton Lodge; Rev. H. Berry, of Acton rectory; Robert Barclay, Esq. of Berry Hill, England.

The following communications were presented.

A letter from the recording secretary to the president, on the publication of the Society's Memoirs, stating that he was privy to the whole arrangement of the work, proving that the extracts were made with perfect fairness—that their extent and tendency were not determined by the editor—that no omissions or alterations were made by him—and that this statement was induced by a series of letters which had appeared in the New England Farmer.

A letter from the Rev. Henry Berry, Herefordshire, England, acknowledging the receipt of the Society's Memoirs, accompanied by an Essay on Different Breeds of Cattle—pointing out errors in management, and the mistakes into which certain breeders have fallen—declaring his conviction in favour of Improved Short Horns; and shewing the evils of "*breeding in*" *too closely*, by which is meant putting brothers and sisters together, or breeding from the same family for many generations.

A letter from a gentleman, dated Yorkshire, Aug. 6, noticing the continued zeal for the improvement of cattle, stating that Mr. Whitaker's Improved Short Horns had taken the prize at the late Doncaster Show, beating Mr. C. Champion, of Blyth, &c.

A letter from Yorkshire, (Eng.) in reply to the corresponding secretary, in regard to Southdown and Dishley sheep, observing that the sum of thirty guineas was too small for the purchase of four lambs.

A letter from Mr. Whitaker, Burley, Yorkshire, to the corresponding secretary, acknowledging the receipt of a Berkshire horse-rake, and some Massachusetts patent hay and dung forks; which he and his agricultural friends considered valuable, as improvements, for the general use of the country.

A letter from Mr. Wetherill, Leicestershire, England, acknowledging the receipt of the Society's Memoirs, and opposing the prejudice against white colour in neat cattle, requiring an hundred and fifty guineas for a yearling bull.

A letter from an old breeder in Yorkshire, England, condemning the prejudice against white cattle, conveying his opinions as to form, &c. of Dishley and Southdown sheep, and stating that he had made a purchase for Mr. Powel.

A communication on oyster-shells as manure; prescribing the best modes of preparing them, by grinding when recent, by calcination when old; and shewing, that the farmer should ascertain the deficiencies, before he attempts to remedy the defects, of his soil.

A communication on experiments made on large fields, proving the advantages of fresh manure, over compost or rotted dung.

A specimen of cotton, grown in Roxborough, near Philadelphia, by Dr Tidyman; and a parcel of Carolina cow peas, grown in Pennsylvania, by the same gentleman, were also exhibited, and were considered from the largeness of their product, and the strength of the food which they afford, likely to become a valuable addition to our esculent crops.

A portrait of a celebrated Improved Durham Short Horn cow, was presented from Major Rudd, of Marton Lodge, England, by the corresponding secretary.

An improved probang for relieving hoven cattle, and a trochar as a substitute for a common knife in such cases, were exhibited by Mr. Powel.

The premium bill for the Annual Exhibition of 1826, was then adopted.—Adjourned.

(*From the Minutes.*)

JOHN P. MILNOR, *Rec. Sec'ry.*

CULTURE OF COTTON IN VIRGINIA.

[The culture of cotton, in districts extending eastward and northward of the line to which it had been hitherto confined—we mean as *a staple crop for sale*—has succeeded in a degree fully equal, we believe, to the anticipations of those who have had the spirit to lead the way in experiments on a large scale. The following extracts from gentlemen of Virginia, will show the earnestness with which the trial of it, as a great agricultural resource in that state, is going on, and serve, with their accompanying samples, and other like evidences, in our view, to confirm the soundness of the remark made in the 32d number of this volume, by a much esteemed and very judicious correspondent, that "every indication that I have seen or heard of, as to the present crop of cotton in Virginia, is highly favourable. The small parcels cultivated heretofore, by a few individuals, have sufficiently established the *quality* of our cotton. To my mind, it is now rendered certain, that the cotton planter in *lower* Virginia lacks nothing but confidence in the article, to be placed on a footing with the tobacco planter of the *upper* country."]

Indian Fields, near Yorktown, Va., Nov. 7, 1825.

Mr. Skinner,

Sir—As we have lately commenced the cultivation of cotton as a staple crop, I am desirous of knowing what competition the quality bears to that made farther south; and, indeed, how it will be approved by our own manufacturers, and what character it is likely it will sustain in your market. With this view, I enclose you the contents of one ball of the present crop, and will be much obliged by your giving me your opinion of its quality. It is raised from the old Virginia seed, and was planted about the first of May. I shall be also obliged by your comparing this sample with that sent you by the Hon. Mr. Stevenson, from Virginia, and if any difference, which it is in favour of.

Very respectfully,
Your most obed't serv't,
WM. McCANDLISH.

Dear Sir, *Richmond, Oct.* 24, 1825.

You were good enough in the spring to send me *samples* of some Egyptian and South Sea cotton, and I promised you in return, a *specimen* of my own crop, cultivated upon the *Pamunky*, within twenty miles of this city. I now enclose to you *two* samples: one parcel is from the green seed; the other a small dark seed, cultivated in North Carolina. Those who have seen these samples pronounce them very fine. They are uncommonly white,* fine and silky. The cultivation this year was intended merely as an experiment, and I am now satisfied cotton ought, and will. become a staple in the low lands of Virginia. I planted only 75 acres; the greater part of it was light land, not manured, and I expect to make 10,000 weight of ginned cotton, allowing 4 lbs. of seed for 1 of ginned cotton. Next year I shall cultivate a large crop: land that will produce 3 barrels of Indian corn to the acre, I am satisfied will suit cotton, and yield more than any thing else at 12 or 14 cents.

Very truly, your obed't serv't,
A. STEVENSON.

Mr. John S. Skinner, *Baltimore, Dec.* 1, 1825.

Sir,—Having carefully examined the two specimens of Virginia cotton sent me yesterday, I am of the opinion that they are, in their present state, both very handsome specimens.

The sample furnished by Mr. McCandlish I consider the best, as to the length and the strength of the staple; they are, in my judgment, about equal in point of fineness and colour. Much, however, depends upon the manner in which it is ginned, as the staple may be injured in that process.

Mr. Stevenson observes that he has sent *two* samples, and as I have not been able to discriminate between them, I have given you my opinion as of one.

The specimen furnished by Mr. McCandlish, I think, would bear a comparison, in every respect, with fair quality of Georgia uplands.

Yours, respectfully,
JOHN SYKES.

CORN AND COB MEAL.

Sir, *South Carolina, Nov.* 25, 1825.

Mr. Lowell, of Boston, having mentioned a circumstance relative to Indian meal, ground cob and all, and given to cattle, I would beg leave to state an experiment I made myself, not on a quadruped, but a biped.

Having had some ear-corn crushed in the common way, at a neighbouring mill, I begged the owner of the mill to permit the miller to pass a small quantity through the grist mill; and when it was done, I took it home, and desired the cook to sift it well, bake it, and serve it up for the dinner in the kitchen. She did so, and the negro to whose share it fell, ate it without making any observation. He seemed to think it not so good as usual, but ate of it without difficulty.

Corn is now 75 to 100 cents—and such was the zeal for the growth of cotton, under the idea (God help the silly ones!) that it was to bring 20 to 30 cents, that it is difficult to obtain. Now, could not we make use of Mr. Lowell's oxen and the negro, as the means of doing service to the community in the approaching crisis of scarcity—for in the middle districts of South Carolina, scarcity will and must be felt?

Could not the mills which kiln-dry and grind meal for the West Indies, try the southern market with meal produced from the cob and grain, kiln-dried and ground together? I take it, the purchasers could get it in casks from the sea-ports. This they cannot do with corn, however cheap. The sea voyage is sufficient injury to it. The river passage in leaky boats is fatal to its value and quality; and as the water navigation is a perfect monopoly, in the hands of a few wealthy planters and merchants, *we, the people*, cannot look for any cheap carriage from them—and we have long since been told by the legislature and its chosen agent, that we must not *dare* to look to a conveyance by land.

Amphicon.

CUT-WORM,

VALUABLE PREVENTIVE AGAINST THEIR DESTRUCTIVE RAVAGES.

Extract of a letter to the Editor, dated

Cahaba, Alabama, Nov. 10, 1825.

"Being just now engaged in the operation, I am reminded that although many of your subscribers are aware that the refuse from the China tree, (Pride of India,) is an infallible remedy against cut-worms, yet there may be many of them, who are not. I have been in the practice, for 15 or 18 years, of strewing the leaves, stems and berries on the ground where I intend planting cabbages in the following spring. After the first hard frost they generally fall off, or may be easily threshed off, when they should be gathered up and thrown on heaps on the cabbage bed, and spread in the spring, when they will have become a good manure. I have known 1500 plants to be set out in one season without losing half a dozen by the cut-worm, on ground where the year before a large portion had been destroyed by them.

With much regard, I am, sir,
Your obdt. servant,
ALEX. POPE."

LIME—AS A MANURE.

Sir, *Wilna, Cecil county, Md., Dec.* 4, 1825.

I observe you promise to the Editors of the Richmond Enquirer, some extracts and references from the American Farmer, on the subject of lime as a manure. You may add the evidence and information of a "Maryland Farmer living on the borders of Pennsylvania." The quantity of lime generally put on per acre, is from 40 to 50 bushels at each manuring, until each acre has received 150 bushels. It may be applied either on the sod, or newly ploughed ground. Some lay it out in small piles of one bushel each, convenient for scattering. My practice is to scatter from the tail of the cart, which, with little practice, may be applied with regularity, remembering the lime must be first slaked. I live twelve miles from the kiln, and pay there for it 14 cents per bushel—it is worth 8 cents more to haul it—and never apply stable manure without it. In answer to the question, whether it is generally used in Pennsylvania, I will say the county which adjoins us, (Chester,) speaking within bounds, has at least one thousand lime kilns. Hardly one good farmer is without one—and you will observe they have also to purchase the lime stone, there being but few good quarries in the county, and haul the stone in many instances from eight to ten miles; and, in short, every man who improves his land in this country, and deserves the name of a farmer, *limes*. What excuse, then, can a man having poor land make, who lives in the neighbourhood of limestone.

POTATOES.

It is some time since we have called the attention of our country friends to the cultivation of this most valuable of all vegetables. Last year we had great abundance of potatoes. The consequence was, that they fell in price; then we were stunned with complaints verbally, and by letter, on account of the reduction in price. These complaints stopped our pen, and we are sorry for it. After diligent inquiry, we are satisfied that last year, as well as every year, for the last five-and-twenty years, potatoes paid the farmer *better* than any other crop he raised. Those who kept their potatoes until the spring, obtained high prices, and, upon the whole, they paid very well.

This year, our potatoe crop is not an average crop, and the potatoes, generally speaking, are not of a good quality. They now fetch seventy-five cents a bushel in our market, and are but an indifferent potato. If our planters had planted a few thousand more bushels of potatoes, we should have had abundance of them, and they would have received more money than they will now get for the productions which have been raised in the place of potatoes. Again, if more attention had been paid to the selection of *good seed,* and the cultivation of the crop, we should not now have our potatoes not only scarce, but indifferent in quality. Potatoes are neglected more than any other vegetable. Sufficient care is not taken to select good seed, to prepare the ground, and tend them after they are planted. And when the farmer has done with them, not one in twenty of our housewives pay proper attention to the cooking of them. Under all these discouraging circumstances, it is not to be wondered at that our potatoes are neither good nor plenty.

For some time our wharves have presented large quantities of Nova Scotia potatoes, for sale. This was endurable. But when we see *two thousand three hundred and thirty-five* hampers of potatoes advertised as arrived in *one* vessel, from England, we cannot but complain to our farmers, that they are inattentive to our own, and to their country's interest. They should more carefully and more extensively cultivate potatoes.

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* This, we believe, is not a very desirable quality.
Ed. Am. Farmer.

We do not pretend to understand a great deal about farming, but we defy human ingenuity to satisfy men of plain, common understandings, that it is right or proper in our farmers, to drive us to the necessity of importing potatoes from England. That we can grow them infinitely cheaper than they can is perfectly clear. The tythes and taxes annually paid by the English farmer, is equal to what our farmers pay for the purchase of their land, in fee simple. In Pennsylvania we pay no tythes or taxes, and we can work our farms as cheap as English farmers can work theirs. Yet for all this, the English are able to pack up their potatoes in hampers, ship and transport them three thousand miles, pay a duty of 15 per cent. to our government, and then sell them as fast as they are landed on our wharves.

We place the facts before our farmers and our agricultural societies, and we beseech them to take such order on them, as their own interest, and that of the country requires.

We cannot prevail upon ourselves to close this article, without saying that the cultivation of *hemp* and *flax* is nearly as much neglected as that of potatoes. If these things were attended to, and our *iron ore* and *coal* brought together by skilful artists, our state would, in ten years, be the most wealthy and the most populous in the Union.

[*Phila. Dem. Press.*

BROOM CORN.

This plant, though seldom mentioned in agricultural or other publications, is extensively cultivated in this vicinity, especially in the town of Hadley, where the quantity of land annually planted with broom corn is not far from one thousand acres. It is presumed there is not a town of equal extent in the United States, in which so much land is employed in the cultivation of this article. In a tour through the state of New York to Cayahoga river in Ohio, a few years since, we did not notice so much as half an acre of it in the whole distance. We understand, however, that its culture is pretty extensive in some parts of New Jersey. The mode of culture, in the towns on Connecticut river, is very similar to that of Indian corn, but it is said to require two or three times as much labour. The produce of an acre varies from 300 to 700 lbs. of that part of the plant which is made into brooms, (a few inches of the stalk, and the panicle divested of seed,) and from 25 to 70 bushels of seed. Different opinions are entertained as to the value of the seed. Many assert that it is superior to oats; others estimate it much lower. It is probably worth 25 cents per bushel for hogs and cattle, but is of less value for horses. We are informed that the crops of broom corn in Hadley, Hatfield, &c. in favourable seasons, are worth from 25 to 50 dollars per acre, standing in the field. A considerable portion of the United States and Canada is furnished with brooms by the towns on Connecticut river, and we learn that large quantities are exported to South America.

Broom corn, called by botanists *Sorgum Saccharatum*, is a native of the East Indies, and we know not the date of its introduction into Europe and this country. It is not mentioned in the first edition of Dean's New England Farmer, published in 1790. The whole plant is highly saccharine, and attempts have been made in France to extract sugar from it, but without sufficient success. In England, the summers are not warm enough to bring broom corn or Indian corn to maturity.

[*Boston Gaz.*

FALL PLOUGHING.

You will do well to take advantage of the Indian summer, by ploughing most, if not all your land this fall, which you propose to till the next season. The advantages of fall ploughing are—1st. It saves time and labour in the following spring, when farmers are generally pressed by their avocations, and their cattle are comparatively faint and weak. 2. Land which is ploughed in autumn will be more exposed to the action of frost than that which is suffered to remain unploughed, and frost will pulverize the soil more effectually than can be accomplished by any artificial methods. 3. Ploughing lands late in the fall, is of service, by exposing insects, and their eggs and larvæ, to be destroyed by frost. If, however, the land is very light and sandy it may be as well not to plough it till spring, as it will be more solid and tenacious, if permitted to remain without being stirred previous to the setting in of winter.

Much has been said on the depth of ploughing; but we believe that no general rules, not liable to many exceptions, can be given on this subject. The depth should be governed in some measure by the staple of the soil. Where the soil is deep, deep ploughing is to be preferred. But where the soil is very thin, it may be necessary to commence its cultivation with shoal ploughing. If the plough turns up too much at a time of the barren soil immediately beneath the upper stratum, the succeeding crop will be of little value. But the owner of such soil should endeavour to render it deeper by due degrees, according to the manure he may be able to bestow upon it. A shallow soil is not only deficient by its furnishing but little *pasture* for the roots of plants, but it is liable to be so much scorched by droughts as to be incapable of producing any profitable vegetation. If, then, your soil is thin, plough it with a shoal furrow, and sow it with rye. The next season plough a little deeper, and add manure, &c.

Land should generally be broken up from the sward with a deeper furrow than may be required in subsequent culture. Harrowing and shallow ploughing will then answer through a course of crops. If the soil is light and porous, the furrow slice should be turned over as flat as possible. If it be a stiff loam or mixed with clay, it may be well to lap the furrow slices a little one upon the other, so as to have the air and frost pervade the hollows or interstices between and under the furrow slices.

[*N. Eng. Farmer.*

FALL SOWING GARDEN VEGETABLES.

Although we have heretofore given a pretty long article on this subject in the New England Farmer, vol. 3, p. 118, it may not be amiss to put our readers in mind of it at this time. Those vegetables which will bear a considerable degree of frost, may generally, we believe with safety, be sown in autumn. And even the more tender sorts, provided they are sown so late that they will not vegetate till spring, may, perhaps, succeed with fall sowing, and come forward somewhat earlier in the spring, than they would if their sowing was omitted till the usual time. With market-gardeners it is an object of considerable importance to produce early vegetables; and with common farmers it may be of some consequence to make a part of their gardens in autumn, when they have generally more leisure than in the spring. Miller's Gardeners' Dictionary says, to cultivate parsnips for the farmer, "*sow the seed in autumn soon after it is ripe;* by which means the seed will come early the following spring, and get strong before the weeds will grow so as to injure them. The young plants never materially suffer through the severity of the season. The same writer says that garden carrots are propagated at two or three different seasons. The first season for sowing the seed is soon after Christmas."

Perhaps potatoes, planted pretty deep in the fall, and covered with leaves and straw, or long manure, with rather a thick layer of soil above the manure, might come forward early, and flourish well in the spring.

N. Eng. Farmer.

EXTRACT OF A LETTER.

Pittsburg, Nov 26th, 1825.

Below is a statement of the weights of my cattle alive.

One cow, 6 years old	1540 lbs.
Her calf, 4 months old	616
One cow, 4 years old	1680
Her calf, 6 weeks old	224
	4060 lbs.

S. H.

HORTICULTURE.

CULTIVATION OF THE VINE.

By an American Navy Officer.

During my recent visit to France, I went to see a Mr. Valcourt, who had resided in different parts of the United States about twenty years, but left there in 1813, to take possession of an estate, the bequest of his father. Mr. Valcourt is a gentleman of much intelligence and general information; is well acquainted with the agriculture of our country as well as of his own. His estate is pleasantly situated on the right bank of the Moselle river, about a mile and a half from Toul, on which he resides, occupying himself in improving it; and is what may be termed a scientific and practical farmer.

From this gentleman, with whom I lived about a month, I received the following information on the subject of the vine. When he was in Kentucky, in 1805, he tells me that he went frequently to visit a Mr. Dufour, a native of Switzerland, who had established himself, with his family, on the Kentucky river, between Jessamine and Hickman creeks. A company had been formed in that state for the purpose of introducing the cultivation of the vine; and this Mr. Dufour, a very intelligent and well informed man, was chosen to conduct the enterprise—in consequence of which he returned to Europe to procure shoots of the vine for planting. It was thought that the vine had a disposition to acclimate itself to a warmer temperature, and that, consequently, it would be best to take the shoots, or plants, from a country colder than that to which it was to be transferred. He therefore took with him, the vine of the Rhine and Moselle, of Burgundy and Champaigne. He, however, procured some shoots of a warmer climate—such as Spain, Portugal and Madeira He was very much surprised to find that all the leaves of the shoots from the colder latitudes were burnt up by the sun, and crumbled into powder resembling snuff, which did not happen with the shoots of the warmer climates. In consequence of which, when Mr. Valcourt saw him in 1805, he was trying to increase, as much as possible, the vine of Spain, Portugal, &c., and abandoning that of the more northern latitudes. The company, however, not meeting with as much success as it was expected, was dissolved—and Mr. Dufour purchased the ground; but whether he prosecuted its cultivation or not, Mr. V. was unable to say, not having heard any thing of him since that time. From Mr. Valcourt's own observations, he is decidedly of opinion, that in Kentucky and Pennsylvania, the summers are much warmer than they are in his part of France, (Department of Meurthe,) where neither the Indian corn or vine are ever scorched by the heat, except when the sun darts its rays from between large black clouds, which, uniting and concentrating the rays, operates like a burning glass;

and that the vine of the more southern countries would be the best, particularly for the middle states of the Union. But from whatever country, or part of a country, that the shoots are taken, a man accustomed to the raising of that particular kind of vine, should be procured to attend to its cultivation, because every kind of vine requires, in some measure, a different management—and as there are several hundred species of vine, it is next to impossible to give a certain course of culture. However, I have noted some general remarks that may not be useless.

The side of a hill, exposed to the south, it matters not how steep it may be, provided it can be ploughed, is always preferred. The ground which is deemed best, is to the depth of about one foot—a light soil mixed with pebbles, beyond which depth the soil is strong and clayish: experience having proven, that when the root or foot of the vine is set in this latter kind of earth, it grows with more vigour, and is not so subject to the diseases of the vine, called *coulure*, or running—that is, when a tree, loaded with blossoms, does not produce fruit; and *brulure*, or burning, when the leaves are scorched by the sun, and fall off; as it frequently happens that although the leaves drop off, the fruit still remains, but is tasteless and worth nothing.

There are three kinds of shoots for planting. The first and best, is the root of the vine. The second, is a branch of the last year, with a part, say three or four inches, of the wood of the preceding year, or even older This is very little inferior to the root itself. The third is merely a branch of the last year.

The ground is ploughed before the winter sets in. The shoots may be planted either in the fall, or spring, or even during the winter when the snow is on the ground, if it be not too much frozen, because the snow keeps the earth moist, and is very favourable to the sprouting of the vine. It is sometimes planted in hills, like Indian corn, but most generally in rows, (in consequence of the scarcity of ground,) and in the following manner:

The ground is opened to the depth of about 18 inches and one foot long—putting into each hole, when planted like Indian corn, (the mode considered best, where ground is not scarce,) two shoots. Figure 1, represents the vine when first planted. It is about 18 inches deep, and one foot in a horizontal direction; then bending upwards; making 2 feet 6 inches that the vine is actually in the earth, leaving generally two eyes, or buds of the branch, above ground. In the department of Meurthe, and other parts of the north of France, it has been found by experience, that the vine should be left three years as first planted, taking care every spring to trim it, leaving never more than three eyes, or buds, to each branch, according to its strength or vigour. After the third sprouting, it is again set further into the ground, and is what the French call *provigner*. It is done in the fall of the third year, or spring of the fourth, and in the following manner:

The dotted lines of Figure 2, represent the vine as planted first in Figure 1. The ground is then opened with a hoe, or pick-axe about two feet in length and eighteen inches deep, on the right side, as it were, of the vine, being careful not to disturb the first root. The vine is then laid along the opening, and covered over, so that the sprout or shoot, which was before only two feet six inches under ground, is now four feet six inches; and if even the next year it is again *provigné*, so much the better, as the great object is, that the vine may receive as much nourishment as possible from the earth without losing sight of the proper soil. This method of planting will answer for almost every species of vine, and is, perhaps, the best that can be adopted. One of the reasons offered, that the vine in the West Indies, and some other places, perishes so soon, is, that it is left as first planted, without giving sufficient extension to the root. The vine sometimes appears sufficiently strong to *provigner* the second year; but from experiments it has been found not to succeed as well as when done in the third year, particularly in the north of France. On the fourth year the vine generally bears fruit, but sometimes sooner. Manure, if used, ought to be extremely rotten; but the best is fresh earth: animal manure should never be used in planting the vine This remark holds good for every kind of trees as well as vines.

I have seen the *Gervais* apparatus, for making wine. It is simply a common still top, but is very little in use; as the quantity of spirits actually saved by it, does not, from divers experiments, exceed two bottles from a vat of 1500 gallons, and which resembles the liquor obtained from a first distillation of brandy: so that a common air-tight board covering over the vat in which the grape is put for fermentation, seems to possess all the advantages of the still-top.

Figure 1.

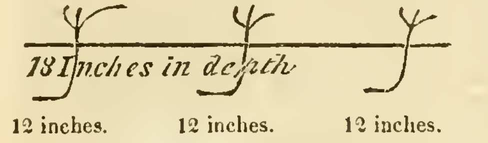
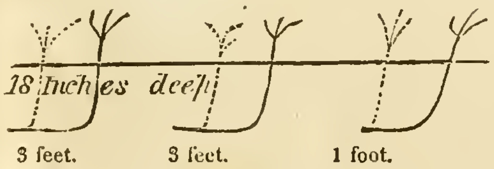


Figure 2.



ASPARAGUS BEDS; PEACH TREE INSECT; PRESERVATION OF PLUMS.

[A few years past, the editor was sent by the post-master-general to Pittsburgh, to attend the prosecution of a mail robber. At the cheerful and hospitable table of a Judge W. he noticed asparagus very far surpassing any he had ever seen, and though much time has elapsed without procuring information as to the composition of the beds, upon which the quality of the article mainly depends; yet the subject was not, neither are such things apt to be forgotten, when they fall, though never so transiently, under our observation. Occasion was recently taken, in the course of correspondence on other topicks, to seek for the process by which Mr. Miltenberger had brought this valuable vegetable to such extraordinary perfection, and the following is the result.]

SIR: *The Gully, Oct.* 21, 1825.

The asparagus beds in the garden of my excellent and hospitable neighbour, Mr. Miltenberger, were originally constructed in a clay soil, according to the directions contained in Mr McMahon's book on gardening,* giving a plentiful supply of well rotted stable manure. When they began to produce, he covered the beds with a coat of *sharp river sand*, with a little manure intermixed, *three or four inches in depth.* This covering of sand, which discourages the growth of weeds, keeps the beds warm and loose, is the great secret in producing the very fine asparagus you saw. The produce still continues to be very remarkable, both in quantity and quality.

Allow me to say a word to you on the subject of the insect which infests the peach trees. Orchardists to the eastward, cannot be more annoyed by this destructive pest than we are, west of the mountains. Just as the tree comes to maturity, and begins to give us its luscious fruit, it is assailed by this enemy, and, under its wounds, immediately pines and languishes, and in a season or two, entirely dies away. The remedy is the great consideration. Our experience here teaches us, that the various recipes published in your excellent journal for the prevention and destruction of this insect, are ineffectual. The *external* applications to the roots and trunk of the tree, of lime, ashes, tobacco, salt, charcoal, oil, tanners' bark, boiling water, &c. &c. are useless, because they do *not reach the abode of the insect.* In the fall, and before the commencement of cold weather, this insect, in its *chrysoidal* state, has reached its winter abode just below the surface of the ground, entirely covered by the bark of the tree, and a little bedded in the sappy part of the wood. Thus securely housed, it defies any of the external remedies I have mentioned. To counteract this evil, we pursue the simple and easy practice of removing the earth, and scraping away the gum, late in the fall, from around the trunk of the tree, and thus exposing it to severe freezing. The frost penetrates the shelter of the worm and destroys it. If this will not answer, you have no remedy but the knife, by which you tediously search for, and destroy these insects, thousands of them found as small as a very fine thread.

We have the belief here, that peach trees live longer in grass,* than in cultivated ground. It is thought that the grass, growing a foot or two up and around the trunk of the tree, baffles the fly, beetle, or whatever insect it may be, in its attempts to puncture and deposite its embryos in the bark.

For the preservation of our plums upon the trees until they ripen, there seems to be no remedy. It appears to us to be perfectly idle to plant, particularly, any of the fine kind of this delicious fruit. It is true, that you may succeed with some of the ordinary kind, by planting the trees about the door, where the ground is much trodden and hard beaten; but in our orchards and gardens, whether the trees stand in grass, or cultivated ground, as soon as the blossoms have fallen and the young fruit is formed, you perceive that every plum is punctured and the destructive embryo deposited, which continues its ravages until the whole crop is prematurely brought to the ground. All the publications I have seen upon this evil, have yet failed to give us an effectual preventive. We have some confidence in that prescription which tells us to gather up and destroy all the diseased plums as they fall to the ground. We are now making this experiment, in the hope that it will be destructive of the progeny intended to prey upon us next season.

I would be glad to give you a description of a very ingenious, and apparently practicable "*side hill*" plough, invented by Mr George Evans, of Pittsburgh, but I am at this moment not perfectly capable, having seen it only once at our late agricultural exhibition. I will examine it, and, if permitted, send you a detailed description of it.

WM. WILKINS.

LADIES' DEPARTMENT.

THE NURSERY.

From "A Treatise on the Physical and Medical Treatment of Children," by Dr. Wm. P. Dewees.

(Concluded from p. 293.)

After children have risen from their beds, they should be dressed as quickly as possible; they should be carefully washed and combed, and then be permitted to inhale the fresh air, either in doors or without, with as much freedom as the nature of things will permit. For the first purpose, the nursery should be well but carefully ventilated; or what is still better, the children should be allowed to retire to another room when practicable, and especially during the time the nursery is cleaning: hence the propriety of two rooms being devoted to this purpose; and for the second, when the weather is proper, they may be allowed to go out of doors.

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* One of the many valuable books which kind neighbours have taken from our library, and forgotten to return. Ed.

* At Mr. Grahame's, in Stoystown, on the top of the Allegany mountains, we saw fine flourishing peach trees which it was said had been bearing for twenty-six years. ☞ Mr. G. promised to send us, by some wagoner, a few young sugar-maple trees! Ed.

So soon as the above necessary operations are performed, children should have their breakfasts, so that the stomach need not suffer, either from too long fasting, or from the indulgence of too great an appetite, excited by a long abstinence.

The means by which the nursery is warmed, is not a matter of indifference. Two important objects should always be kept in view in constructing it—namely, security from accident to the children; and secondly, its affording sufficient warmth.

These may be secured, by an open fire of wood, or of coal, protected by a high and substantial fender of wire, that the children may not approach it too nearly—or by a stove placed near the hearth, and defended by an iron railing. We, however, should never advise the stove, where an open fire can be made use of with equal advantage as regards heat, and we believe that the introduction of Lehigh coal will secure to us this desirable end, with less expense and more security than any other method.

The objections to a stove are numerous, and deserve a serious attention: 1st, there is great danger that the children may get severely burnt, as we have often witnessed—2d, they are almost always too much heated—3d, the air is rendered too dry by a destruction of its moisture, and becomes impure by the burning of millions of the little particles which are constantly floating in it, and though one of these objections may be partially obviated by placing water upon the stove, yet it will not remove the second—4th, the air is almost constantly injured by substances thrown upon the stove, as grease, meat, &c —5th, there is always a temptation to do some kind of cooking upon or in a stove, to the annoyance of the comfort, or the injury of the health, of the little inhabitants of the nursery, beside the risk of scalding them by heating water upon it. We lately saw an instance of death from this cause, and have witnessed many times minor accidents from the same source.

We have already forbidden the performance of a number of operations in the nursery—we need not repeat them here; we shall merely reiterate that the nursery should be the purest place in the house, as well as the one in which the children should most delight to be. It should, therefore, never be made a place of punishment, by banishing children to it for any little delinquency or inadvertence they may have been guilty of—but on the contrary, a temptation should constantly present itself in the nursery, by making it the place of amusement; children will then bear being placed there, without considering it a place of confinement, or one in which they are to experience privations.

The nursery should be as free as possible from air-holes or crevices, that the children may not be exposed to partial draughts of air, and that the air of the room may be preserved in winter of a pretty uniform temperature. Attention to this will enable the children to play in every part of the room, without injury, and it will also prevent the desire to crowd round the hearth, which will diminish the risk of their clothes taking fire, or doing themselves other injury.

Too much care cannot be taken to guard against the accident of clothes taking fire There is but one security against this when an open fire-place is the means employed for warming the room; namely, by dressing the children in worsted garments, or at least the outer ones—that is, the frocks and aprons. It is but too common to disregard this important precaution, and the accidents are numerous in consequence of this neglect. Many are in the habit of dressing their children in proper materials as regards their body clothes, but seem altogether to forget that if these be covered by a muslin or linen apron, it may take fire and do serious mischief; it is therefore not sufficient that the under garments be made of woollen materials, if these be surmounted by an inflammable substance.

Children that can just run about, as well as older ones, are almost constantly in the habit of having sharp pointed sticks for playthings, and nothing is more common than to put an end of one of these sticks in their mouths, and run with it when it is in this situation, at the risk of doing great mischief to the mouth and throat, by its being violently driven into them by the force of a fall. My friend Dr Physick related to me a case of lockjaw and death, from this cause—and we ourselves have witnessed many less severe accidents from the same source.

It is also wrong to permit children to run about the nursery barefooted or in their stocking feet, especially if the floor be covered by either carpet or mat; as it every now and then happens that they run into their feet, needles, pins, nails, glass, and other sharp substances, that may be concealed in the substance of the floor covering.

The introduction of glass into the nursery should be avoided as much as possible; as a constant liability to accident is incurred, by its being broken and strewed over the floor, and by the children treading upon or handling the pieces.

We cannot recommend too earnestly the frequent ventilation of the nursery. The best possible method to purify the air, is by the admission of fresh air from without. This should be done at least daily, by opening the windows and doors for a short time. During the process of ventilation, however, the children should be removed from the nursery, or protected by a screen from the immediate current of air; but the former is the better plan, as children are not always obedient to the wishes of their nurses, and may expose themselves very improperly. This ventilation should not be performed if the weather be wet, as the damp air might prove more injurious, than the air intended to be removed.

No sand should be strewed on the floor of the nursery, as it is always inconvenient to walk upon, as well as furnishing a great quantity of very fine sharp dust, which is very injurious to the eyes, when the floor is swept or otherwise disturbed.

Some have recommended fumigations of vinegar and other substances for purifying the air. This is neither necessary nor availing, especially as we can always command a much better article, namely, the fresh external air.

The air of a nursery should be maintained at a pretty uniform temperature; for this purpose a thermometer should be a part of the furniture of every well appointed nursery. It should be placed remote from the fire, and not to face it, as it may, if so situated, give a false result, as it will be necessarily affected by the radiant heat of the fire. It should never exceed 66 or 67 degrees of Fahrenheit. The thermometer should be placed out of the reach of the children, or it will be quickly destroyed.

We are fully persuaded that the excessive heat of nurseries has occasioned a great mortality, especially among very young children. In the first place, it over stimulates them—and in the second, it renders them so extremely susceptible of cold, that every draught of cool air endangers their lives. They are maintained in a constant state of perspiration, which is but too frequently checked, by an exposure to even an atmosphere of moderate temperature.

Children should never be left alone—their helpless condition requires constant care, especially when very young. They should never be left to themselves while feeding, as they may choke for want of timely and proper assistance; nor should they be placed upon a chair or table, unless they are well watched. The children of the poor very often meet with serious accidents, from the necessity the mothers are frequently under to leave them for a time to take care of themselves. A friend related to me a fatal accident arising from this cause, which may, perhaps, serve as a warning to those who are in the habit of leaving children alone, when there is no absolute necessity to do so. A poor woman, who had been spinning upon a large wheel, was obliged to leave the room for a short time. Before she went, she placed her child (an infant who could not walk,) upon the floor, some distance from the wheel. She presently heard something fall, and her child to scream violently; she ran instantly into the room, and found the poor infant transfixed to the floor by the spindle of the wheel passing entirely through its body. She supposed that the child had pulled at the thread she had been spinning, which was sufficiently strong to overset the wheel.

Animals should not be left with children when alone, for both dogs and cats may be provoked to do mischief, if too rudely assailed by them.

When a night lamp is burned, it should always be placed in the chimney-place, or immediately before the door of a stove, that the smoke may be carried off. If this be not done, the air of the room becomes loaded with lamp-black, to the great injury of the lungs.

It is not a matter of indifference in which direction the light falls upon the child; young children eagerly seek it with their eyes; and if it do not fall directly upon the face, the eyes will be strained to the direction in which it is strongest. In consequence of this, the muscles will contract the habit of moving the eyes in an oblique direction, which may terminate in squinting. On this account all objects capable of attracting the attention of the child, from the vivacity of their colours, should never be presented to them sideways, or immediately over their heads.

We have already forbidden washing or ironing, or any other operation being carried on in the nursery, which shall load the air with vapour; as it will necessarily expose the children to colds, coughs, or other severe affections of the lungs.

MISCELLANEOUS.

HISTORY OF CONGRESS.

History of the Second Session of the Eighteenth Congress, which ended on the 4th of March, 1825.

Review of Documents communicated to Congress.

Post Office.

In a preceding chapter, the provisions of the new Post Office law were given in a specific manner, together with a brief view of the revenue accruing from the establishment in the several States, as well as the balance of expenditures over the income, for the conveyance of the mail, in some of the states. This chapter is devoted to other particulars in relation to the Post Office Department.

On the 23d of December, 1824, Mr. McLean, the Postmaster-General, in obedience to law, sent to the House of Representatives a list of unproductive post roads, for that year. They consisted of such as, having been established for the space of two years, had not, during the previous year, produced one-third part of the expenses of transportation. Of these, 23 were reckoned as being in New York—4 in Massachusetts—4 in Vermont—30 in Maryland—62 in Pennsylvania—16 in New Jersey—24 in

Ohio—16 in Kentucky—15 in Indiana—21 in Illinois—39 in Missouri—16 in Arkansas—134 in Virginia—37 in North Carolina—39 in Tennessee—29 in South Carolina—20 in Georgia—6 in Alabama—14 in Mississippi—and 17 in Louisiana. Many of the post offices had yielded little or nothing; and in every instance the cost had greatly exceeded the revenue.

In pursuance of a resolution of the House of Representatives, Mr. McLean, on the 14th of January, 1825, transmitted a report, showing, in detail, how often the mail was conveyed in a week on each route; the extent of the several routes, in miles; the annual transportation on each, and the annual expense in each instance. From this document, it appears that the aggregate extent of all the post roads was 79,140 miles, on which the mail was conveyed yearly, backwards and forwards; 10,380,316 miles, for the sum of 737,164 dollars and 8 cents. In his report, the Postmaster General observed, that in many cases, it had been found that parallel routes had been established so near to each other, that the transportation of the mail upon one of them was all that the public convenience required. In other cases, routes had been established precisely on the same ground of other routes, differing only a few miles in distance, and in the names of places for their commencement and termination. This produced, Mr. McLean stated, a number of corrections in the distances, in the course of the year 1824, wnich, with inaccurate estimates, unavoidable on new routes, particularly in new states, occasioned a disagreement between the report of this session and that of the year before. He believed that a complete revision of all the mail routes in the Union, was indispensable; and notwithstanding it was a work of great labour, he expressed a hope that it would be accomplished prior to the first session of the Nineteenth Congress.

On the 19th of February, 1825, Mr. McLean sent to the house a list of the contracts made by the department during the preceding year. They were formed on the advertisement of the Postmaster-General, of the 14th July, 1824, and were decided upon on the 2d of October, of the same year. All these contracts bear date on the 1st of January, 1825, and will expire on the 31st of December, 1828, being for four years each. They are 390 in number. Some of the contractors, the whole of whose names are given in the report, (No. 99, vol. 6, of the State Papers,) have general contracts; one of them, we notice, as many as eighteen—which, if advantageous to the individual, must be beneficial to the government, as enabling it to contract at a cheaper rate.

According to a report which was made by the Postmaster General to the President of the United States, on the 30th of November, 1824, the funds of the Department had been considerably improved. The expenditures, from the 1st of April, 1822, to the 1st of April, 1823, exceeded the current receipts of the same period, to the amount of 55,540 dollars and 39 cents; and those from the 1st of April, 1823, to the 1st of April, 1824, to the amount of $16,298 91 For the three quarters of a year, ending on the 30th of June, 1824, the receipts exceeded the expenditures in the sum of $10,744 83. In comparison with the year ending on the 1st of April, 1823, the condition of the Department had been improved, by a reduction of expenses, and increase of the receipts, to the amount of 100,540 dollars and 39 cents per annum, computed upon the revenue for 1824. In addition to which, the extent of transportation of the mail had been greatly increased, and further security procured for it, by its additional conveyance in stages. From new arrangements adopted with regard to newspaper postage, it had been ascertained that the receipts from that item had been augmented at the rate of about 25,000 dollars a year. Strenuous exertions had been made to collect the balances due to the establishment

Many actions had been brought during the year, and judgments obtained; and, in a short time, Mr. McLean expected that all demands against delinquent Postmasters, where there was any probability that more than the costs could be collected, would be in suit. To avoid the necessity of paying costs, out of the post office funds, in cases of insolvency, where the account was of some years standing, the district attorneys had been instructed, when the parties were in that situation, not to institute suits. The improvement effected in the revenue of the Department, he conceived, authorized the opinion, that it would be able to meet an increased expenditure for the transportation of the mail and the convenience of the public. By discontinuing unproductive routes, and applying the money expended on them to routes of more general utility, he thought the community might be benefited without adding to the expenditure of the establishment. With the exception of 590 dollars and 6 cents, the sum appropriated by Congress to repair so much of the mail route from Nashville, in Tennessee, to New Orleans, as passes through the Indian country, had been applied to that object, and the amount paid, after an inspection and valuation by two practical men. The balance was to be expended in making further repairs in the winter of 1824-5.

On the 15th of December, 1824, in obedience to a resolution of the Senate, at the first session of the Eighteenth Congress, the Postmaster-General made a report on the most practicable post route from New Orleans to Washington City. The route on which the mail has been carried for several years past, from one of these places to the other, he estimated to be 1,380 miles in extent, and requiring 24 days to travel it. In a direct line, Washington is distant from New Orleans 960 miles. After presenting a view of several routes, he states, that if a substantial road were made by way of Warrentown, Abingdon and Knoxville, through Alabama and Mississippi, along which the facilities for road making are numerous, the mail could be transported from the national metropolis to the capital of Louisiana in eleven days; and that, if the road were to pass through the capitals of Virginia, North Carolina, South Carolina, and Georgia, the mail might be conveyed in less than twelve days. The route on which the mail is now transported to New Orleans, although more circuitous than some others, in the present condition of the roads, he considers the safest and best. It passes through and supplies many important towns and villages, and thickly settled parts of the country. The cost of transportation, for three trips in each week, is 52 dollars and 76 cents per mile. On a good turnpike road, it could be conveyed in a stage as often, and in less than half the time at the same expense, with the utmost security, and a very considerable increase of the receipts of the department. These are serious advantages, and not to be overlooked.

In another report to the Senate, of the 4th of February, 1825, Mr. McLean represented, in answer to an inquiry in a resolution of that body, that ten thousand dollars would be sufficient to render the post road passing through the Indian territory, between Columbus and Jackson, in the state of Mississippi, fit for the transportation of the mail from Washington to Natchez and New Orleans, in covered carriages or stages. A bill was introduced into the House of Representatives, on the 21st of February, 1825, making an appropriation for this object; was read a first and second time, and committed to a committee of the whole house on the following day; but it does not appear to have been finally acted upon.

[*Nat. Journal.*

ABLE ADMINISTRATION OF THE GENERAL POST OFFICE.

From President Adams' Message to Congress, on the 6th inst.

A report from the Postmaster General is also submitted, exhibiting the present flourishing condition of that Department. For the first time for many years, the receipts for the year ending on the first of July last, exceeded the expenditures during the same period, to the amount of more than forty-five thousand dollars. Other facts equally creditable to the administration of the Department, are, that in two years from the first of July, 1823, an improvement of more than one hundred and eighty-five thousand dollars in its pecuniary affairs, has been realized: that in the same interval the increase of the transportation of the mail has exceeded one million five hundred thousand miles, annually; and that one thousand and forty new post offices have been established. It hence appears, that under judicious management, the income from this establishment may be relied on as fully adequate to defray its expenses; and that by the discontinuance of post roads altogether unproductive, others of more useful character may be opened, till the circulation of the mail shall keep pace with the spread of our population; and the comforts of friendly correspondence, the exchanges of internal traffic, and the lights of the periodical press, shall be distributed to the remotest corners of the Union, at a charge scarcely perceptible to any individual, and without the cost of a dollar to the public treasury.

The London Morning Chronicle, after speaking of the doubtful movements of the Russian army of the South, the visit of inspection of the emperor, &c. gives the postscript of a letter from a gentleman in the North of Europe, in the following words:—

"*Postscript.*—I have just learnt from too good an authority, that the Russian army under Wittgenstein, in Bessarabia, have crossed the Pruth, and commenced hostilities against the Turks. They have long been preparing for this step, and waited only the slightest pretext to proceed to extremities. This will be the harbinger of hot work in Europe."

It appears by the Paris papers that there was a disturbance at Rouen when General Lafayette passed through that town. He dined with M. Cabanon, one of his old colleagues in the Chamber of Deputies. More than 2000 persons assembled in front of the house in the evening, shouting, 'Vive Lafayette!'

English Papers.

RECIPES.

BLEEDING AT THE LUNGS.

The New York Evening Post says, "It is stated with unshaken confidence, and as the result of actual and repeated experience, that half a tumbler of gin sling, well covered with powdered nutmeg, proves a speedy and efficacious stop in that dangerous and alarming complaint, a bleeding of the lungs. It was the discovery of accident, but has never been known to fail, though often tried, even when all other known means have been resorted to in vain."

TO PRESERVE POLISHED IRONS FROM RUST.

Polished iron-work may be preserved from rust by a mixture not very expensive, consisting of copal varnish intimately mixed with as much olive oil as will give it a degree of greasiness, adding thereto nearly as much spirit of turpentine as of varnish. The cast iron-work is best preserved by rubbing it with black-lead.

But where rust has begun to make its appearance on grates or fire irons, apply a mixture of tripoli with half its quantity of sulphur, intimately mingled on a marble slab, and laid on with a piece of soft leather: or emery and oil may be applied with excellent effect; not laid on in the usual slovenly way, but with a spongy piece of the fig-tree fully saturated with the mixture. This will not only clean but polish, and render the use of whiting unnecessary.

TO PRESERVE BRASS ORNAMENTS.

Brass ornaments, when not gilt or lacquered, may be cleaned in the same way, and a fine colour may be given to them by two simple processes. The first is to beat sal ammoniac into a fine powder, then to moisten it with soft water, rubbing it on the ornaments, which must be heated over charcoal, and rubbed dry with bran and whiting. The second is to wash the brass work with roche alum boiled in strong ley, in the proportion of an ounce to a pint; when dry it must be rubbed with fine tripoli. Either of these processes will give to brass the brilliancy of gold.

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 9, 1825.

☞The Report of the Committee of the Agricultural Society of the Valley, embracing the Report of the management of Mr. Turner's premium farm, has been postponed until the next number.

LIME.—*Its preparation and uses, as a material for building, and as a manure.*—Having been invited in the Richmond Enquirer, to call the attention of our correspondents to the subject of *lime*, as regards its use and effect as a manure, we have concluded to copy from the indexes of the last three volumes, and the present one, as far as it has been published, the references to the essays of a practical nature which have already appeared in them. In addition to which, we have sent to the Editors of that journal, for the information of those who are not subscribers to the Farmer, some engravings which have been used by us to illustrate the structure of lime-kilns, of the most approved form in use in this state, where great quantities are annually burned, to supply this city with the best building lime, and for use as a manure, to a very great and increasing extent, and with increasing assurance of its value and efficacy.

VOLUME FOURTH.

Lime, quick, should not be exposed to atmospheric air; in the public works at Woolwich used immediately from the kiln, p. 1; the comparative excellence of white, how to test; suitable proportions for a good cement with sand; experiment 2; the brown containing manganese, is peculiarly suitable for hydraulic mortar 3; will kill the insect that produces sedge or stunt in wheat 71; equal to manure on fallow land after the ploughing in of turnips 85; mixed with horse food is a remedy for the botts 96; is destructive to the turnip fly 141; the oxi muriate of, the principal agent used in bleaching 214.

Lime Stone, to test; will effervesce with strong acid; containing sand, clay or iron, when properly burnt, is the best kind of lime for water cement 1.

VOLUME FIFTH.

Lime, definition of and remarks on its application 59; opinion of Sir H. Davy on its operation quoted 97; do. of Agricola quoted and preferred by T. Pickering 97; remarks on the use and application of, by T. Pickering 97. Remarks on Lime or calcareous earth, in connexion with soils 380.

VOLUME SIXTH.

Lime, remarks on burning 119; on burning with Susquehanna coal 308; on its effects in preventing fly 307.

VOLUME SEVENTH.

Lime, on the use of as a manure, and on the construction of kilns for burning it, with an engraving of a kiln, by John Patterson, Esq. 9 Perpetual kiln for burning, at Mauch Chunk, *ib.*

Lime Kilns, improved construction of by Peter Lossing, with an engraving, 241.

MEMBERS OF CONGRESS—May be supplied with the AMERICAN FARMER during the Session of Congress.—*Nat. Int.—Journal.—Gaz.*

☞ Since our last notice, a great number of flattering offerings have been made to the editor, demonstrating the general and enlightened desire which exists to disseminate the knowledge, the means, and the fruits of agricultural improvements and domestic comforts. In this, as in other paths of usefulness, and of honourable ambition, the officers of our navy are ever conspicuous.

From Commodore Hull, in the Pacific, we have received a box of the indigenous potato, from which new varieties may be obtained—also a variety of large and beautiful beans and Indian corn, not hitherto seen by us; and a species of vegetable, nutritious in taste and appearance, but unknown to all who have seen it.

From Midshipman Wilson, returning from a visit of protection to our hardy fishermen on the coast of Newfoundland, a fine water dog of the celebrated race of that region—with two barrels of superior potatoes.

From Alexander Reed, esq. of Washington, West Pennsylvania, a barrel of pippins, which we venture to pronounce superior in size and fairness to any ever seen in this city, corresponding in fact, with the extraordinary scale of the natural productions of the West.

From Gen. Forman, beautiful varieties of maize, for General Lafayette.

From Gorham Parsons, Esq. of Massachusetts, and from Gen Cadwallader Irvine, of Pennsylvania, and M. Dupont, of Delaware, specimens of Saxon wool, of surpassing fineness, from imported sheep.

From Colonel Powel, of Pennsylvania, we have received and passed to others from him, gratuitous offerings of sheep of great value, bred with different degrees of various blood, adapted, according to his acknowledged judgment, to the circumstances of different sections of the country.

For want of time, other evidences of liberality, which do honour to the individuals and confer lasting benefit on society, are, for the present, omitted.

☞ WANTED, a person well qualified to manage a sheep farm, on shares. A Swiss, or married man from the north of Scotland would be preferred Inquire at the office of the American Farmer.

TOBACCO.—Amount of inspections in the state warehouses, during the last week —88 hhds.

CONTENTS OF THIS NUMBER.

Pedigrees of Mr. Powel's Improved Durham Short Horn Cattle—Quarterly Meeting of the Pennsylvania Agricultural Society—Culture of Cotton in Virginia as a staple crop—Corn and Cob Meal—Cutworm, valuable preventive against their destructive ravages—Lime as a manure, used in Pennsylvania and Maryland—Potatoes—Broom Corn, large quantities grown in Massachusetts and Connecticut—Fall ploughing—Fall sowing Garden Vegetables—Weight of Cattle in Pittsburg—On the Cultivation of the Vine by an American Navy officer, with engravings—Asparagus beds, Peach tree Insects, Preservation of Plums—The Nursery, extract from a Treatise on the Treatment of Children, by Dr. Wm. P. Dewees, concluded—History of Congress, Post Office—Able administration of the General Post Office, from President Adams' Message—Recipes—Editorial.

PRICES CURRENT.

ARTICLES.	per	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	34	35		
COFFEE, Java, ...	—	18	19	22	25
Havana, ...	—	15½	17½	18	20
COTTON, Louisiana, &c.	—	16	20		
Georgia Upland, . . .	—	15	16		
COTTON YARN, No. 10.	—	33			
An advance of 1 cent	—				
each number to No. 18	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33	34	37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	3 50	
Shad, trimmed,	—	6		7	
FLAXSEED, Rough, . .	bush	1 10	1 12		
FLOUR, Superfine, city,	bbl.	4 75	5 00	6 00	6 50
Extra . . . . do.	—	5 12½	5 25		
Fine, ...	—	4 75	4 62		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	53	55		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	85	95		
do. Red, ...	—	85	90		
Buckwheat, ...	—	55	75		
Rye, ...	—	54	55		
Barley, ...	—	95	1 00		
Clover Seed, Red . .	—	5 00		5 50	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	bush	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36		
Peas, Black Eyed, . .	—	1 00		1 50	
Beans White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	200			
HOPS, ...	lb.	27	29		
HOGS' LARD, ...	—	10		12	
LEATHER, Soal, best,	—	27	28		
MOLASSES, sugar-house	gal.	45			
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	1 87½			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2			
OIL, Whale, common, .	gal.	31½	35		
Linseed, ...	—	90	95		
PORK Baltimore Mess,	bbl	13 00	13 50		
do Prime, . . .	—	10 50		12 00	
PLASTER, cargo price,	ton.	5 37½			
RICE fresh, ...	lb.	3¼		6	
SOAP, Baltimore White,	lb.	12	14	18	
do Brown, .	—	5½	7½	9	10
WHISKEY, 1st proof, .	gal.	26	27	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37½	50	
SUGARS, Havana White,	c.lb.	13 50		15 00	16 00
do. Brown, . .	—	11 00			
Louisiana, ...	—	10 00	11 00	11 50	12 50
Loaf, ...	lb.	19	22	20	22
Lump, ...	—	16	18	19	
SPICES, Cloves, ...	—	80	85	1 00	
Ginger, Ground, . . .	—	7		10	
Pepper, ...	—	18		25	
SALT, St. Ubes, ...	bush	42	45		
Ground Alum, . . .	—	50		62	
SHOT, Balt. all sizes, .	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 25		
Lisbon, ...	—	1 20	1 50	1 62	1 75
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled,	—	33	35		

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AGRICULTURE.

MR. TURNER'S PREMIUM FARM.

Report of the Trustees of the Agricultural Society of the Valley, for 1825.

The Trustees of the Agricultural Society of the Valley, who were appointed a committee to view the farms offered, and award the premium "to him who they supposed to be the best manager of a farm, and most deserving of reward—taking into consideration the force employed, the crops made, his rotation, his method of improving the land," &c. &c., respectfully report:

That in the month of June last, Mr. Robert Page, of the county of Frederick, announced himself as a competitor, and desired them "to view his farm and decide upon his claims." For this purpose they assembled at his house, with a determination to inspect minutely all that came properly under the object of their visit, that they thereby might be enabled to expose mismanagement, where it existed, and to render more conspicuous the proof of good husbandry and domestic economy, where they were visible. To perform their arduous duties, and to award justly the premium entrusted to their care, the committee was sensible required they should divest themselves of all "fear, favour, or affection." And they now confidently assert, that this they accomplished, and that their report is based upon their impartial and unbiassed judgment. It affords the committee peculiar pleasure to state, that in their opinion the competitors for the very desirable premium offered by the society, are governed by the most honourable and commendable feelings—a spirit of emulation so much wanting with farmers—a praiseworthy desire to excel in the noblest occupation. This their whole course, thus far, has manifested to the entire satisfaction of the committee.

In viewing Mr. Page's farm, your committee were first led to his corn-field, containing five and twenty acres, which they found in a beautiful state—exhibiting proofs of industry and attention which met their decided approbation. They next came to his crop of wheat, (then nearly fit for the sickle,) which they found such as would be called a safe and profitable one, that would in all probability yield from fifteen to twenty bushels per acre. It is but proper to notice that the committee were particularly struck with the clean state of this crop, the result of fine seed and a proper preparation of the ground. The committee passed from the cultivated to that part of Mr. Page's farm which is this year in grass. Around this part of his tract they found the fencing in bad order, and in the fields some symptoms of bad management, which the rest of his farm was unusually exempt from. They allude to the *sprouts* of various descriptions, and the *loose* stone, that occupied space they would rather have seen appropriated exclusively to grass.

Mr. Page's buildings, of *every description*, are neat and comfortable; his arrangements for the accommodation of his negroes, his stock, &c. are worthy of the highest commendation. The committee would have been pleased could they have presented to the society a statement of the force employed, the crops raised, the stock supported, &c. on Mr. Page's farm. The circumstance of his uniting the labour and product of several farms, will prevent him from gratifying the expressed wishes of the committee on that point.

In the month of August your committee were called upon to view the farm of Henry S. Turner, of Jefferson county, who then announced himself a competitor for the premium above mentioned. Of *his* management, the committee will be able to give a much fuller report, from the circumstance of his having presented to them a statement (certified as the rules of the society require,) of his whole system of farming. They would not be doing justice to Mr. Turner's very able and satisfactory memoir, did they attempt to change its phraseology, or fail to embody it in their report; they therefore present it to the society *verbatim*, with the fullest impression, that as it is a practical production, it will prove to the farmer one of high and lasting value.

Mr. Turner says, "Wheatland Farm contains almost 940 acres of land, all inclosed: 300 in wood. A portion of the arable land is divided and laid off into six fields of 90 acres each, which yield a regular rotation of crops in the following succession, to wit: wheat, corn, fallow, wheat, clover, fallow; or, corn, fallow, wheat, clover, fallow, wheat. It will thus appear that two of these fields are in wheat, and one in corn annually: consequently a moiety of the tillable land yields a grain crop each year, though no part is in corn oftener than once in 6 years, nor in wheat oftener than once in 3 years, and all the fields are in clover, in succession, two years and six months, it being my habit to sow clover in the month of February, (on a snow,) and never to break up fallow until August, when the field which had produced corn the previous year, and another (a clover field,) are ploughed to the average depth of 7 or 8 inches, with four barshare ploughs, three horses or mules in each—the quantity daily ploughed from six to seven acres, according to the state and condition of the ground. After the ploughing has been completed, these fields are harrowed in the direction of the furrow, with heavy square harrows, drawn by three horses or mules, then laid off crosswise, in lands of 18 feet, and sowed the first of October at the rate of from seven to eight pecks per acre, and carefully barrowed in, which is performed in seven or eight days with four harrows. It is of the greatest importance, and demands the most particular attention of the farmer, to commit his seed to the earth at the *proper time*. Placed, as it were, between Scylla and Charybdis, he has to steer a skilful and a narrow course to avoid the dangers that await him; a few days too early, and his hopes are wrecked upon the ravages of the Hessian fly; a few days too late, and they are destroyed by the desolating influence of the winter frost. Experience and much observation has assured me that the beginning of October is the *proper time;* but to defer seeding thus late with safety, our land must possess great strength and vigour. I omit, therefore, no means of fertilizing it to the greatest possible degree, as I am well assured that there is no labour performed by the farmer so amply remunerated as that employed in the application of manure.

"My calculation is always on twenty bushels of wheat to the acre. This expectation is rarely disappointed—it more frequently happens that there is an excess; better cultivation would insure increased product. I am convinced our lands are capable of yielding 30 bushels on an average. In the year 1819, I gathered from 55 acres 1743 bushels; from 90 acres 2400 bushels; and from 40 acres 680 bushels—the first and second being of the blue stem wheat, (the most prolific kind that I am acquainted with,) and the last Lawler, (or Snyder,) which, though less liable to the attacks of the Hessian fly than most other species, is by no means exempt, and is less productive than the blue stem by 20 or 25 per cent.

"About 1500 bushels of wheat is secured within two barracks, near my barn and stables, (each 60 by 20 feet,) for the purpose of furnishing provender and litter to the stock stationed here during winter; the remainder of the crop is stacked near the centre of the field intended for corn the ensuing year; and here are erected shelters and pens, where the farm stock are fed and profusely littered, during winter, in temporary ricks, and with alternate layers of wheat-straw and corn-stalks, with the blades, shucks and tops attached, for the purpose of providing an ample fund of manure, to be hauled out on the same field early in the spring.

"I deem it the most economical method to plough under the manure in a rough state, and let the process of decomposition go forward under the tegument laid over it by the plough, as by this means the very serious waste by evaporation is obviated, the corn crop is measurably benefited, and it is in a state of preparation to impart the highest degree of nutriment to the succeeding crops of wheat and clover.

"My corn field receives the same preliminary cultivation as do my wheat fields; it is then laid off and planted four feet each way; (by close planting, say three or three and a half feet each way, in *strong land*, I am confident would be increased, as the number of plants would be astonishingly multiplied; but the use of the plough would be more difficult, and no price which the article usually commands in this region of country, would justify the expense of its cultivation with the hoe.) When about six inches high, it is harrowed with heavy harrows, the middle teeth being removed; the harrows are followed by hands provided with small light rakes, with four iron teeth, to uncover the corn and thin it, leaving two stalks in each intersection, after which it is ploughed over three times with the *double shovel*, and laid by at the commencement of harvest. This is an admirable instrument for cultivating corn; it operates superficially, so as not to disturb the manure turned under by the barshare plough, and will perform two-fifths within a given time more than the single shovel, with, I believe, no augmentation of labour—at all events, one mule is fully adequate to the task.

"I do not estimate my average crops of corn at above 30 to 35 bushels per acre, though in the year 1823 I made 50 bushels per acre on 90 acres. The season was propitious, and this corn was planted 4 feet by 3, two stalks in the hill.

"My force consists of eight ordinary men, two fine active boys, one old man in the decline of life, and a blacksmith and a carpenter occasionally; twelve horses and mules, with the incidental increase of brood mares, and four yoke of powerful, well trained oxen. And here let me take occasion to testify in favour of this most frugal, useful and estimable beast, the ox, and to express the earnest and anxious hope that he may speedily be brought into more general use among us, and elevated in the estimation of farmers to the rank which *his* merit and *their* interest so justly entitle him to. With the exception of ploughing, harrowing and threshing, the entire labour of my farm is performed by oxen; the magnitude of their service, and the various ways in which they are most useful, is incalculable, and incredible to those who unfortunately have no experience of them. They are generally *fat*, never *poor*, and are never grain-fed, except during the most inclement weather in winter, when laborious service is exacted of them, and even then they require nothing better than a scanty allowance of the offal of the granaries. One important result of this is, (among many other advantages,) that my work horses are at rest nearly half the year, by means of which the expense of feeding them is considerably curtailed, and their lives prolonged. But it is in the particular of hauling out manure in the spring season, (when the horse and mule teams are employed in breaking up the corn field,) and hauling stone for fencing at all seasons, that the instrumentality of the ox is most conspicuously valuable; and much of the same service may be done likewise in the fall. Previous to the adoption of the extended use of oxen on my farm, I was constrained to rely almost exclusively on plaster of Paris for improving the soil. I used it to the amount of twelve or fifteen tons a year, and bought it during the war even at the cost of 40 dollars per ton; its effects were sometimes truly miraculous, but at other times not visible at all. All this is now superseded, and for the last five years I have entirely omited the use of plaster, as by means of my ox teams I am enabled to get out, in good time, in the spring, the manure which has accumulated during the winter. Let me, however, not be understood as recommending the disuse of plaster—this is far from my intention: I have had ample proof of its unquestionable efficacy, and as auxiliary to stable or barn-yard manure, appreciate it most highly. Last spring, with eight oxen and three men, I manured, highly, 120 acres, passing over the richer spots, and applying the manure only where it was wanted—the number of acres actually covered with manure I estimate at not less than 80; an inconsiderable part consisted of unrotted straw. But upon the ox (valuable and important as his services certainly are to the concerns of agriculture,) panegyrick must not be exhausted: of all animals subservient to agricultural labour, the mule stands preeminent. I have no terms adequate to bespeak his merit—none that could be employed, could exaggerate it; he is a long liver, a small consumer, a powerful, faithful, and enduring labourer. I speak with the confidence of more than thirty years experience of the relative qualities and capacities of the mule and the horse, when I pronounce the superiority of the former to the latter in *every respect*, and for *every purpose*, connected with the operations of husbandry. It is a great misfortune, and much to be lamented, that prejudices, absurd as they are unfounded, and greatly detrimental to the farming interest, should still be fostered against this much abused and despised, though most valuable animal, by thousands ignorant of his history and usefulness, in despite of the testimony of those who have tried and know him well.

"The number of mules I have at present on my farm is 12, of different ages; this number I mean to increase to 16, when the horse will be banished, except for the saddle and riding carriages, and even in this exception a concession is made by judgment in favour of fashion. Some of those I now have, have been 16 or 17 years upon the farm, and I now value them at $200 each. With such impressions, I trust it will not be deemed impertinent that I avail myself of this occasion to recommend most earnestly to the society, to extend their sanction and patronage to the more general introduction of the mule, by suitable premiums, or such other provisions as their wisdom may approve; being convinced that there is no object more in accordance with the interest of agriculture and the furtherance of their patriotic design.

"I should have mentioned in the foregoing part of this brief and hasty memoir, that it is my custom to cut and stack in the fields as much of my corn as I am able to haul into the farm-pens during winter; by this means the mass of manure is greatly increased, and its quality improved, the stalk acting as an *absorbent* to arrest the fertilizing fluids which would otherwise in a great measure escape. The whole of my corn is shucked in the field on the stalk; besides other obvious advantages, by this method, there is an important saving in time—my corn is generally housed by the middle of November.

"Exclusive of the six fields above spoken of, I have another containing 70 acres, (a late purchase.) This has rested some years in clover, to resuscitate from the exhausted state in which I received it. It will now be equally divided, and each half alternately cultivated, two years in succession, in wheat and clover.

"I never employ hired labour for any purpose in aid of my farming operations, and with six cradles generally complete my harvest in twelve or fourteen days.

"The foregoing outline is deemed sufficient for the present purpose; should a more minute and comprehensive detail be thought interesting, I beg leave to refer to vol. 2, page 400, of the American Farmer. Some allowance, however, will be here claimed for typographical errors, and other seeming inconsistencies, all of which are susceptible of satisfactory explanation."

It may readily be supposed, that from the fact of the committee having *heard* much of Mr. Turner's extraordinary management, they were prepared to *see* much, and that if their expectations were in the smallest degree disappointed, they should not fail to express it to the society. Appearing at Wheatland with these feelings, they were not prepared to notice or give credit for little proofs of good management only, but sought for and required more prominent ones. They now feel it a duty to state, that their highest anticipations were most satisfactorily and fully realized, and that *they* were not able to discover a *solitary exposure* of mismanagement; on the other hand, *on every part of his estate*, the most forcible and convincing exhibitions were given of a well selected rotation, and of the most indefatigable and devoted attention to business.

Some members of the committee believing that additional information to that given in his "Memoir," could be furnished by Mr. Turner, proposed that he should be required to answer questions which they were prepared to propound to him, which he readily consented to do. They are presented, with their answers, to the society, in the simple garb and laconic form they first appeared; in that shape they will be more acceptable to farmers. They follow in order:

Quest. 1st. What quantity of stone-fencing have you on your farm; and was it all built by your own hands?

Ans. I have a few roods less than 700. When I commenced, I employed a man to work with my blacks, who aided in building a few roods.

Quest. 2d. Do you ever vary your quantity of seed wheat, per acre, with the different qualities of the soil?

Ans. My practice is not to vary the quantity of seed, in consequence of the difference of my soil not being considerable; but were I to vary, I should put a less quantity on thin land.

Quest. 3rd. Have you of late years increased your quantity of seed?

Ans. I have, since my lands have improved; having put formerly one bushel, whereas I now sow from seven to eight pecks. I am of opinion that thick sowing is preferable to thin.

Quest. 4th. What is your experience on the subject of seeding wheat as to the depth of deposite?

Ans. I consider the depth of deposite above four inches dangerous; if the ground is well prepared, the bare covering of the earth is sufficient.

Quest. 5th. Do you think it desirable that the ground should be much pulverized for the reception of seed wheat?

Ans. I should be apprehensive of its baking were the earth made too fine; clods of small size would be preferable.

Quest. 6th. When you first took possession of your farm, what was the average crop of wheat and corn per acre?

Ans. In 1804, when I first took possession, my average crop of wheat was about twelve bushels per acre; and of corn, five barrels in a good season would have been considered a great average.

Quest. 7th. Was the improvement which has been made in your farm produced by the expenditure of any other resources than those derived from the production of the farm?

Ans. By none other.

It will appear, upon reference to question the first, alone, that on Mr. Turner's farm there is nearly 700 roods of stone-fence. The remainder of his fencing is made in the neatest manner of locust stakes and rails. On the whole farm your committee were not able to find a *pannel* that would not be considered good. They were particularly struck with the number of *fine gates*, (twenty-one,) admitting ingress and egress, (generally in a direct manner,) with every field. Mr. Turner's barn is a valuable one—his barn-yard judiciously laid off—his stables are roomy and comfortable—his arrangements for the preservation of his grain after it is threshed and cleaned—his horse feed when ground, implements of husbandry, &c. are such as afford strong evidences of good management, and offer to every farmer valuable hints.

On the 24th of this month, Mr. Bushrod Taylor, of Frederick, who had previously announced himself as a competitor, accompanied the committee over his farm, and afforded them every facility in his power to investigate, minutely, *his* claim.

Your committee had got but an imperfect view of Mr. Taylor's farm, before they discovered sufficient assurances that they were where a system of management existed. In approaching Mr. Taylor's house you pass through the centre of his farm, and leave three square fields on the right, the same number on the left, presenting that gentle undulation so desirable in a Virginia farm, where the lands are liable to baking. Around these fields there is the most uniformly good fencing that your committee have ever seen in Frederick, and at the corner of each an admirable and lasting gate. His fences are made of substantial locust posts, well pinned together at top, and placed alternately fifteen inches from a strait line, so as to form, when it is completed, a worm of double that distance, (2½ feet.) The rails are laid upon a stone foundation, and in *every respect* the fencing is such as particularly pleased the committee. When your committee state that Mr. Taylor's farm is laid off in the northern style, they hope they will be considered as saying much in its favour. His plan of dividing a farm of 165 acres of cleared land into three lots of 10 acres, and six fields of 22½ acres each, they highly approve of; because they believe with our soil, and in our country, *a few fields only on a farm* are totally inconsistent with an improving rotation.

Considering Mr. Turner justly entitled to the premium—because "his crops, allowing for the difference of force employed," are at least *as good*, "his method of improving the land" and "his rotation" *better*. and other manifestations given of his being a "*better manager of a farm*," and "*more deserving of reward*"—your committee do with much pleasure award it to him. They deem it not impertinent to ask of Mr. Turner that hereafter he should not conceal his "lights under a bushel," but that he should endeavour to do good by precept as well as example. To Mr. Taylor they would say, "*go on, do well, and thrive;*" and to the society, that they regret they had not placed under their control another premium. The most pleasant part of their duty is to reward merit where they discover it.

The trustees have, to the best of their abilities, performed the duties of their laborious and unthankful office, without the hope or the wish of any other reward than the promotion of the public good. Under these assurances they doubt not their decision will meet the approbation of high-minded and generous competitors.

By order of the members,
WM. M. BARTON,
President of the Board.

A. S. Tidball, *Sec'ry.*

COB MEAL.

Delaware county, Penn. Dec. 2, 1825.

J. S. Skinner, Esq.

Sir,—In the last American Farmer, I find a communication on the advantages of *cob meal;* likewise an inquiry how long it has been in use in other places, &c. The neighbourhood in which I live is one of the oldest grazing districts in our country. It is inhabited by practical and *intelligent farmers,* who pursue it solely for profit, and are men of close observation. The machine mentioned by Dr. Mease, (Evans' patent,) for breaking up the cob, I think has been in use with us for many years, say fifteen at least. When it was first put in operation it was thought to be a great acquisition, principally on account of its saving labour—the corn being taken direct from the crib to the mill, saving the labour of threshing. But time has effected a wonderful change in the opinions of the farmers as regards the advantages of *cob meal.* In conversing with a miller some time back, who, I believe, was the first that erected such a machine, he informed me that out of all his customers, (perhaps from 20 to 30,) who formerly had their feed ground in that way, not more than one or two continued it. Besides, when the corn is ground in the cob, the miller takes an eighth instead of a tenth, as is usual when threshed; giving as a reason, that as the cob is of no use to them they cannot afford to grind it for the farmer for nothing. The idea of distending the stomach, by introducing into it indigestible substances, for the sake of quickening or facilitating its digestive powers, to me appears extravagant and absurd, and I believe is contrary to the doctrine of all writers on physiology. If we were feeding an ox for the same purpose, as we are told the camel drivers in Asia feed their beasts, it might answer, to endure long fasts, by giving them charcoal and other indigestible substances, not for nutrition but to absorb the gastric juice, thereby mitigating its corroding influence on the coats of the stomach, and its consequent hunger. To feed an ox for profit, it is necessary that he be kept comfortable and healthy—that he should digest all his food—that it should be nutritious and of easy digestion, and given in proper quantities. In the latter a fault often occurs, either through carelessness, or a desire to feed them fast, they take too much, the stomach cloys, the ox looks sickly and lank, and is several days again before he comes to his appetite. We do not think meal alone, the most economical mode of feeding, either; but as a substitute for *corn cobs,* I would recommend either oats, chaff, or cut straw, for two reasons. First, that it should undergo the second mastication. For that purpose it is necessary that the food should be a fibrous, tenacious, pulpy substance, as the operation of returning the food from the stomach to the mouth is entirely a mechanical one, that of applying voluntarily, the lower end of the œsaphagus, to such a substance, then producing a vacuum by expanding the same organ above, it returns to the mouth.—There are few substances that possess less tenacity than pure raw Indian meal. And, secondly, as all animals that live entirely upon vegetable substances, have weak digestive powers, by giving them pure meal, it becomes a solid mass on the stomach, much less liable to be acted on by the gastric juice, consequently passes off partially digested.

By going into the stable where oxen are fed on cob meal in the morning, the smell resembles much that of vegetable fermentation, and very different from that of well digested food. By a close examination you will find every particle of the cob entire, excepting what change it underwent between the teeth, and I believe as totally indigestible as sawdust. A few years ago I was feeding a number of cattle on cob meal, my horses were hard at work, and were fed out of the same garner, I noticed their declining in flesh fast, and mentioned the circumstance to a neighbour, who inquired what they were fed on, I replied, cob meal; he then mentioned several instances where it had operated in the same way; I immediately changed to whole corn, and in one week there was an evident change for the better, although the work continued the same.

A Subscriber.

Dear Sir, *Calvert county, Dec.* 3, 1825.

I observed in your paper of the 25th ultimo, an account of corn and cob meal for feeding cattle, by the Rev. H. C. Perley, of New Rowley, Mass., wherein he wishes to be informed if there was any use of cob meal previous to the year 1807-8. If it should afford him any satisfaction, I can with pleasure inform him, that the custom of grinding Indian cob was introduced by your father since the year 1798: his custom at that time was to take ears of corn and have them divided by a machine which he had constructed for that purpose, made of iron bars, in the form of a corn cradle, and by using rammers, the corn and cob was easily driven through—when the whole mass was ground, and afforded an excellent food for horses, cattle, &c. I well recollect an anecdote he related to me respecting a neighbour (Richard Hardesty,) whom you may recollect, who insisted he should grind his cobs without the corn, at the usual rates of grinding; saying, that he would be amply paid for doing so, as the meal from cobs was very preferable to oats for feeding. I frequently had cob meal from his mill, from that time until about the year 1810, when General Joseph Wilkinson, who had a mill near me, had a machine in his mill for the purpose of preparing the corn and cob for grinding; since which time I had cob meal from his mill until his death. The mill falling into other hands since, I do not know whether it is now in operation.

Yours, very respectfully,

JOHN DARE.

[The Editor had entirely forgotten, but he now recollects the circumstances of which he is reminded by a much esteemed friend of his venerated father, who, considering his domestic habits, and the isolated locality of his residence, undoubtedly introduced and invented as many practical agricultural improvements, as any man in America.—Ed.]

ON MANURES.

(*From the Agricultural Almanack for the year* 1826, *patronized by the Philadelphia Society for promoting Agriculture.*)

At a meeting of the Curators of the Philadelphia Society for promoting Agriculture, at its hall, October 1st, 1825—Unanimously resolved, that John Hare Powel, Esq., be respectfully requested to furnish for publication in the Agricultural Almanack, the valuable matter which he has been pleased to select and prepare.

ROBERTS VAUX, *Chairman.*

Kirwan's Analysis of Stable Manures.

105 *lbs. of*		Charcoal.	Lime.	Clay.	Sand.	Fixed Salts.	Carburated hyd. carb. acid and water.
Cow dung	give	3.75	1.20	0.15	2. 4	0. 6	92.80
Horse dung		10. 2	1.50	0.50	3. 0	0.21	89.77
Sheep dung		25. 0	10.28	29. 0	29. 0	0.72	68.00

ON LONG OR SHORT DUNG.

The discordance in practice, as well as in opinion, prevailing on this question, induced some scientific men to institute a series of experiments, having for object a full and regular solution of it. With this view, parcels of dung (long and short,) were taken from the same stables, on the same day, and applied to crops of the same kind, growing on the same fields. The result was perfectly conformable to theory, and similar in all the experiments. Those parts of the field to which the short dung was applied, gave the best crops the *first* year, but those on which the long dung had been laid, gave the best crops the *second* and *third years;* a fact which authorises the conclusion, that if we wish to obtain *one* great crop, the rotted dung is best; but when we look to more permanent improvement, the long dung is to be preferred.

[*Treat. on Agr. by a Prac. Farmer, Albany.*

ON THE APPLICATION OF ANIMAL MANURES—SEASON AND MODE.

Much depends upon the climate. What is found beneficial in warm climates, will not answer in a cold one. Besides, in wet soils and cold climates, when the dung is bestowed only in small quantities, so little of it is kept together, that fermentation in the ground is retarded, until it is too late to be of any material use to the crop sown with it.

The advantage of using fresh dung, must also depend upon the soil. Practical farmers are in general of opinion, that long dung is more applicable to strong, than to light land; and as it has a tendency, by its fermentation, to divide and to loosen the constituent parts of the soil, and furnishes matter which prevents the particles of clay from coming into contact, and adhering together, it must necessarily have a much more desirable effect on soils too compact, than on those already too light and open.

[*Sinclair's Code of Agriculture.*

I have never had apprehension of the loss of animal manure by sinking, as its component parts are generally so insoluble in water, as to cause them to be left by filtration sufficiently near to the surface for all our purposes: but I have had many motives to guard against its escape by evaporation, and therefore invariably deposite it deeply, and generally in its freshest state, beneath the surface of the land. My experience during nearly twenty years, has taught me that in *this climate, where the exhalations of the sun,* during one season—the influence of wind, the effects of melting snow, and torrents of rain, during another, upon a surface made impervious by frost almost to the edge of an axe, top dressing, except when principally composed of calcareous matter, should seldom be applied. Old pastures remarkable for the excellence of their herbage, or grass lands within the reach of large towns, may be profitably enriched by the application of animal manure to the surface in the spring, when the soil is open, and the grass, by pushing forth its leaves, soon affords some protection from the sun, whilst they imbibe, to a certain extent, the fertilizing principle, passing off in a gaseous form.

The expedients, which the *dearness of land* and the *cheapness of labour,* have coerced certain Europeans to adopt, cannot for ages become profitable, where the farmer tills generally his own soil, and the labourer is paid and protected, as being worthy of regard, and the wages of his toil.

[John Hare Powel, in *Memoirs Penn. Agr. Soc.*

The excess of fermentation tends to the destruction and dissipation of the most useful part of the manure; and the ultimate results of this process are like those of combustion.

It is a common practice amongst farmers, to suffer the farm yard dung to ferment, till the fibrous texture of the vegetable matter is entirely broken down, and till the manure becomes perfectly cold, and so soft as to be easily cut by the spade.

Independent of the general theoretical views unfavourable to this practice, founded upon the nature and composition of vegetable substances, there are many arguments and facts which show that it is prejudicial to the interests of the farmer.

During the violent fermentation which is necessary for reducing farm-yard manure to the state in which it is called *short muck,* not only a large quantity of fluid, but likewise of gaseous matter is lost;

so much so, that the dung is reduced one-half or two-thirds in weight; and the principal elastic matter disengaged, is carbonic acid with some ammonia; and both these, if retained by the moisture in the soil, are capable of becoming an useful nourishment of plants.

Besides the dissipation of gaseous matter when fermentation is pushed to the extreme, there is another disadvantage in the loss of *heat*, which, if excited in the soil, is useful in promoting the germination of the seed, and in assisting the plant, in the first stage of its growth, when it is most feeble and most liable to disease: and the fermentation of manure in the soil must be particularly favourable to the wheat crop in preserving a general temperature beneath the surface late in autumn and during winter.

A great objection against slightly fermented dung is, that weeds spring up more luxuriantly where it is applied. If there are seeds carried out in the dung, they certainly will germinate; but it is seldom that this can be the case to any extent; and if the land is not cleansed of weeds, any kind of manure, fermented or unfermented, will occasion their rapid growth. If slightly-fermented farm-yard dung is used as a top dressing for pastures, the long straws and unfermented vegetable matter remaining on the surface should be removed as soon as the grass begins to rise vigorously, by raking, and carried back to the dunghill: in this case no manure will be lost, and the husbandry will be at once clean and economical.

In cases when farm-yard dung cannot be immediately applied to crops, the destructive fermentation of it should be prevented as much as possible.

The surface should be defended as much as practicable, from the oxygen of the atmosphere; a compact marl, or a tenacious clay, offers the best protection against the air.

[*Davy's Elements of Agricult. Chemistry.*

Dung should be defended from the action of the sun. It should be ploughed in immediately after having been hauled out. What would be thought of the housewife who should expose her tea to the effects of the sun, rain, and wind, before its essence was to be extracted for her purposes!

The farmer should ascertain the constituent parts of his soil, in order that he may supply its deficiencies and remedy its defects. Most soils are deficient in animal matter, as it is difficult of acquisition, and not less difficult of retention. He who should recommend the same manure for all soils, would be scarcely less absurd than the quack who prescribes the same nostrum for all diseases. If it be deficient in calcareous matter, let that be supplied: if it be too tenacious, or surcharged with inert vegetable matter, let the calcareous matter be applied in its caustic state, as quick-lime: if sand be at hand, let it be used in the sheep-folds and barn-yards; thus keeping the animals dry, and finally assisting, as *burned clay*, in mechanically separating the particles of the soil. John Hare Powel.

CULTURE OF COTTON IN MARYLAND.

[Interesting letter on the culture of Cotton in Maryland. published by permission of Doctor Muse, President of the Agricultural Society of Dorchester county.]

Eastville, E. S. Virginia, 22d Nov. 1825.

Joseph E. Muse, Esq.

I have noticed your communication in the 30th number, vol. 7, of the American Farmer, and will endeavour to answer your inquiries. With respect to the Palma Christi, I am not able to give you much information. It was introduced here about two years since, and although a more profitable crop than corn or oats, the former staples of the country, it will be abandoned hereafter for cotton, as infinitely preferable to any thing we have yet tried. This is our first year of experiment in the latter article. Our crops are nearly in, and although the most unfavourable season ever known, the result has fully equalled our most sanguine expectations. It was doubted by many whether the season was not too short to mature the cotton, and liable to be cut off by the frost: but on this point we are now perfectly satisfied Even after frost, there is sap enough in the branches to perfect all the balls. The quality of our cotton ranks equal to the best of upland, and even better. A few bales brought last week 2 cents per lb. in Baltimore above the usual prices. This, I believe, must be owing to its being the product of a more northern latitude. I have no doubt, whatever, that it is the most profitable crop you can raise. The cultivation is precisely the same as corn—the drill system by all means to be preferred. The earlier you can get your crop to stand, the better; but I would not advise you to commence planting sooner than the 10th or 15th of May; we begin here about the 1st. The gust of the 4th of June nearly destroyed our cotton this year, and many ploughed up and replanted. One of my neighbours told me that he counted 110 perfect balls upon one stalk of this replanted cotton. If your field will average *ten balls* to the stalk, it is a good crop. You need not dread the labour of picking out; it is not half the trouble we expected. Some of us plant this year 10, 15, 20 or 30 acres—and expect to finish in about two weeks hence. If you go extensively into cotton, you will require seed. I have promised to furnish Mr. Sinclair, of Baltimore, with seed, which I shall select with the greatest care from a farm that has made the best crop of any in the county, and was not annoyed with rot, rust, or any other calamity. And if the theory held by some, that these diseases, the rot especially, are perpetuated through the seed, it is certainly deserving of attention, to be particular from whence you procure it. With respect to planting, I knew the following experiments made. The seed were thrown into a *loose* flour barrel, and boiling water poured on them; when cold enough to handle, they were rolled in ashes and planted. They came up in *four* days remarkably well. Other seed, soaked in *cold* water, came up in *eight* days. Other seed, planted *dry*, vegetated in *twelve* days. From actual experiment, made by different persons this year, I believe that our *salt* marsh land, if not too low, is peculiarly adapted to cotton. I saw some most beautiful and flourishing last August, growing in a marsh pasture planted as late as the 20th of June, very full of blossoms, and promised well. This is very encouraging to some of us Eastern Shore farmers. I have here ventured a few hints, which, if they prove any way serviceable, will afford me much pleasure.

Very respectfully, your obed't serv't,

F. H. SMITH

P. S. With respect to cultivation, the main object is, to keep it clean of grass and weeds in its early stage. It is not near so liable to suffer from drought as corn, or any thing else.

HOLDERNESS BULL.

TO THE EDITOR.

Sir,—I am glad to find the inquiry in regard to the pedigree of the bull Holderness; not only as it is desirable to have the pedigree of this valuable animal, but as it may lead your readers to notice the pedigrees of *other* breeding cattle which have been imported, and have been paraded with fine names, without having any claim to the excellence of the *Improved* race. although they may as accidental varieties exhibit some of the properties most to be desired.

Nine-tenths of the cows, and many of the bulls, which have been imported from Liverpool. were purchased from mere cow-keepers, whose purposes do not require attention to the value of the offspring, and of course, who cannot be led to give the high prices, which fine breeding cattle of various descriptions always command.

I should like to know, *by whom* the bull Cœlebs *was bred*, by whom Flora *was bred*, and I might inquire by whom any, or all of the Short Horns, which have been brought to New England, excepting those sent by Admiral Coffin. and those imported through Mr Williams, were bred.

I saw an advertisement, not long since, of a cow called "Venus," by which one of my neighbours was led to imagine, that she was the celebrated cow, bred by Mr. Colling, and was prepared to hasten to Boston with a view of making a purchase. A great deal has been said about the high prices, which breeders require for their stock Those who *pay high prices*, must require them in return. Let the purchasers ask for the certificates, and the *names* of the English breeders. from whom the American family is derived. Less hazard would arise, and less discussion would ensue, as to the merits of any established race, if the contending parties, ascertained that they were disputing about *different* things—alike only in having *short horns*.

The successful speculation in Saxon sheep, has led adventurers to bring from England, sheep of various families, for which great prices have been asked. Let the purchasers beware that there is as much difference in the quality of Southdown sheep—and in the quality of Dishley or New Leicester sheep, as in the quality of half-breed Merino, compared with high bred Saxon Merino sheep. And let them beware, that most of the sheep of these breeds which have been brought to the United States, within a few months, for sale, are decidedly bad of *their kind,* however valuable they may be to us, as superior to our own.

A Full Blood Yankee.

Worcester county, Mass. Dec. 1825.

POTATOES.

What will our friends in the interior—what will our farmers say—when we inform them that notwithstanding the daily arrival of potatoes from Nova Scotia, Ireland, Canada, &c. that they now sell, in our market, at *a dollar* a bushel! By the following they will learn, that notwithstanding the heavy duty, our Canadian neighbours are pouring in large quantities of potatoes into the United States.

Quebec, Nov. 21, 1825.

Eight hundred bushels of potatoes have lately been shipped at this port for Boston, in the Micamac and Ranger, making a total of upwards of *twelve thousand bushels.* [*Dem. Press.*

HORTICULTURE.

MONTHLY RASPBERRY.

Dear Sir, *Baltimore, Nov.* 30, 1825.

A gentleman of my acquaintance solicited of me any information that I possessed relative to the succession of the bearing of the monthly raspberry. I feel confident that the bearing may be made certain, in succession, from clipping off the buds, thus throwing back the bearing of fruit, from time to time, which will be more fully understood from practice. I am confident any fruit tree that is prevented from bearing one year, will cause the succeeding year's bearing of fruit to be much finer. I think grapes might be greatly improved by thus acting towards them; or curtailing the quantity that the vine is to bear each year. The monthly rose may be kept in a succession of bearing by judiciously clipping off the first formation of buds, and other productions of nature may be thus treated. I think proper to give you the above, as a hint, to be published through your useful paper.

HENRY ALEXANDER.

P. S. I do not offer the above as being entirely new. But like unto the application of the screw of Archimedes as an elevator by the late ingenious and indefatigable Oliver Evans, it will be new to the great mass of mankind, and must be productive of use.

H. A.

THE WINES OF 1825.

(From late numbers of Bell's Weekly Messenger, received at the office of the American Farmer.)

German Wines.—It is the universal opinion on the Rhine, that the quality of the wine of this year will be very fine, but the quantity will not much exceed an average vintage. The opinion which so commonly prevails in this country, of the necessity of drinking old Rhenish wine, is little known in the country of its production. The wines of 1811 are much esteemed, as well as those of 1822, from the excellence of the vintages; but except these, there is little, commonly no distinction or care as to the ages of the wines. It is said by the wine merchants of Cologne and Coblentz, that the introduction of steam-boats on the Upper Rhine (in the establishment of which they have assisted,) will materially benefit their trade. The little boatmen who have undertaken, hitherto, the carriage of the wine to Holland, were never responsible, and seldom trustworthy persons. Besides the slowness of their operations, the wine entrusted to them often diminished, or deteriorated by a mixture of water; and it has happened that casks for which transit duty has actually been paid in Holland, have been found full of pure water. The steam-vessels will be enabled to tow down the boats laden with wine; and the rapidity of transport, and the absence of risk from dishonesty, must together cause a reduction in price.

French Wines.—Great efforts are said to be made this year to produce a large quantity of sparkling Burgundy, of which a few specimens have already been made, and much esteemed by amateurs. The quality of wine, both in Burgundy and other parts of France, this year, is said to be good, but the quantity not very great.

The vintage is said to be over in the neighbour hood of Lyons and in the south of France. The quantity of wine is stated as below the average supply; but it is believed that in quality it will equal that of the comet.

Tours, Oct. 6.—The vintage of this year is in high repute, and is considered to be the best which has presented itself for many years past; the consequence is, that the prices are comparatively high. The country is filled with Parisian wine-merchants, who are buying all they can lay their hands on They are the more induced to do so, because from the excessive heat of the summer, the grape has produced a very high coloured wine, and it will consequently bear a greater mixture. The price of wine, in this country, is four pounds a piece, (about 60 gallons,) cask included. At Orleans, it is only half that price; but there the wine is not so good; further south, the choice wines have risen to an enormous price: I mean the wines of this season. La Fitte has risen to 3600 francs, to which must be added 800 francs commission for wastage and cellarage, making together 4400 francs for a tonneau of wine, comprising about four English hogsheads; or in other words, about 45*l.* sterling the hogshead; so high is the reputation of this year's vintage. Rose is about two-thirds that price; but as the story goes, it is said, that each merchant in Bordeaux sells as much of the choice wine as can be produced altogether; and the fact is, they are frequently enabled by a mixture, to sell wine nearly as good, for it happens that the ordinary wines of the country, often in three or four years, acquire a bouquet, which gives them as good a flavour as the wines of those vineyards that are in the highest repute. The wines are the great attraction of this country. There are about 2000 English in this town and neighbourhood—for the most part, driven out of their own country by the absurd high taxation, amounting to a prohibition, upon the wines of France. But nothing would tend so much to recal the English emigrants as the repeal of the house and window taxes, of which no vestige is to be found at Tours; consequently, the houses are large, airy, and well lighted; not confined and cramped as English dwellings, with windows blocked up, or making shifts from borrowed lights to evade the tax gentlemen. In short, nothing is so much talked of at Tours, as an excuse for the non-resident English, as the weight of taxes at home; and amongst the first the house and window taxes, which are at variance with domestic privacy, and are worse than a whole establishment of gens d'armes. English families are to be found every where, from Calais to the utmost limit of the Eastern Pyrenees. The legislature have begun to remedy this by reducing the duties, but it is not yet half done for the attainment of its object. Millions are annually spent here. However, the ministry have already done more than they are thanked for at home—they are in advance of the age in which they live.

By advices from Oporto, dated Sept. 27, we learn that the vintage, (for the success of which considerable fears were entertained for some period past, in consequence of the heavy and incessant rains experienced there,) will prove a productive one, and it is hoped that the quality of the wine will be very superior to what was anticipated. The account concludes in the following brief and satisfactory manner: "The vintage, after all, will be a famous one; the weather has cleared up just in time for us, and all is going on most prosperously."

EDUCATION.

THE PESTALOZZIAN SYSTEM.

Art. xx.—*An Epitome of the Improved Pestalozzian System of Education, as practised by William Phiquepal and Madam Fretageot, formerly in Paris, and now in Philadelphia; communicated at the request of the Editor, by* William Maclure, *Esq.*

The great and fundamental principle is, never to attempt to teach children what they do not comprehend, and to teach them in the exact ratio of their understanding it, without omitting one link in the chain of ratiocination, proceeding always from the known to the unknown, from the most easy to the most difficult, practising the most extensive and accurate use of all the senses, exercising, improving, and perfecting all the mental and corporeal faculties by quickening combination; accelerating and carefully arranging comparison; judiciously and impartially making deduction; summing up the results free from prejudices, and cautiously avoiding the delusions of imagination, the constant source of ignorance and error.

The means of effectuating the above are, first, a careful examination and inspection of the objects themselves, or of tangible and visible instruments, calculated to demonstrate their properties and bring them within the reach of the senses. If these can not be obtained, then accurate designs, or representations, and books, and descriptions, although imperfect substitutes, are employed; but these are not to be resorted to until every possible means of acquiring the first two have failed.

"They learn mechanism by the machines or exact models of them; arithmetic, by an instrument called the arithmometer; geometry, by an instrument called the trigonometer, and another called the mathemometer, by which the most useful propositions of Euclid are reduced to the comprehension of a child of 5 or 6 years old; mathematics, by the help of the last mentioned instruments; and all the mathematical forms in substance, by solid figures. Natural history in all its branches is learned by examining the objects in substance, or accurate representations of them, in designs or prints; anatomy by skeletons, preparations, and wax figures; geography by globes and maps, most of the last of their own construction; and hygiene, or the preservation of health, by their own experience, in attending to the consequences of all the natural functions. They are taught the elements of writing and designing by the freedom of hand, acquired by a constant practice, in forming all kinds of figures, with a slate and pencil put into their hands, when they first enter the school, on which they draw right lines, dividing them into equal parts, thereby obtaining an accuracy of the eye which, joined to the constant exercise of judging of the distances of objects and their height, gives them a perfect idea of space, and practises them in a rapid and correct coup d' œil, so necessary in the useful arts and manufactures, and on which the accurate knowledge of the properties of every species of matter depends. They learn music by the distinct difference of sounds, through the medium of an organ constructed for the purpose, and a sonometer; and first, learn sounds before they are taught the notes or signs of those sounds; gymnastics, or the exercise of all muscular motions, they acquire by the practice of all kinds of movements, always preferring those that may lead to utility, such as marching, climbing, the manual exercise, &c. &c. They are taught the greatest part of those branches at the same time, never fatiguing the mind with more than an hour's attention to the same thing, changing the study, and rendering it a play by variety. The pupils learn as many modern languages as there are different languages spoken by the boys of different nations at school, each instructing the others in the vocabulary of his language, while he acquires the words corresponding in the language of those he converses with, until he has a complete vocabulary in his head, when he begins translating his own language into the foreign, and the master, when he corrects his translation, gives him the rules of grammar, by which he is guided in the correction, by which means the pupil learns the practice and theory of grammar at the same time; and while the rule is imprinted on his memory, he has a tolerable idea of the reason and utility of the rule, confirmed by the example in his translation, and supported by the explanation of the master, which avoids the dry, disagreeable, and disgusting study of the theory of grammar, than which nothing can be more irksome, tiresome, and unpleasant to the learner, or more difficult for the schoolmaster, to command attention to; and often renders correction and punishment necessary, to force the pupils to choose the lesser evil.

Education ought to be the apprenticeship of life, and children ought to be taught what imperious necessity may force them to practice when men, always preferring the useful to the ornamental; preparing them to withstand the reverses of fortune, leaving the choice of their amusement and pastime, until their pecuniary independence shall permit them to make a choice of their pleasures.

To court pleasure and avoid pain, includes the greatest part of the motives of human actions; to accomplish which, children ought to be taught to avoid remorse, fear, misery, and ennui. To prevent the first, act always honestly and uprightly; do as you would wish to be done by: secondly, retain all your instinctive courage and view every thing as it really exists: thirdly, allow a moderate indulgence of the natural appetites, and enjoin a total prohibition against acquiring any artificial tastes or appetites; observe frugality, and the strictest economy in the smallest expenditure, recollecting the old proverb, "take care of the pence, the pounds will take care of themselves:" fourthly, obtain a knowledge of the objects of nature and art, and an early habit of receiving pleasure from the examination of them.

Hume's definition of man, that he is a bundle of habits, is as true as laconic, and points out the advantages that instructors of youth might derive from that propensity, namely, that of acting from habit. By constantly and habitually associating pleasurable sensations with all the useful and necessary operations of life, we thus turn the common occupations which the wants of man require into amusements; and form the life of man into an agreeable pastime. If we examine how the trifling diversions of hunting, fishing, gaming, &c. &c. become pleasures, we shall find the cause to exist in habit, and frequent use, which might be more easily attached to some useful employment, the advantages of which would be permanent and lasting, and not finishing when the action was performed, or productive only of remorse and repentance, like nine-tenths of the fashionable amusements. Upon this great and powerful lever of the mind, which as yet has been employed only by crafty politicians, and by that portion of ecclesiastics who have abused religion for their selfish and antisocial purposes, volumes might be written to explain its beneficent connexion with all the ramifications of society; but this digression would take us too far from our present purpose.

Two of the best gifts of nature to man are, health and time; and perhaps the total neglect and abuse of both may be the cause of most of his miseries and misfortunes, both moral and physical; to rectify which, as far as precept, example, and experience can do it, ought to be one of the principal objects of instruction. This is to be effected by adopting the most effectual means of preserving the one, and making the best possible use of the other, before it is too late; for unfortunately the youth of all countries have squandered the greatest part of both before they have learned their value.

The immense advantage of the energy and exertion springing from free will, over the cramped and snail-paced progress produced by coercion and force in the government of men, as well as of the animal creation, must be evident to the most superficial observer; but in no case does the evil so materially injure and destroy the best and most valuable interests of society, as in the coercion and punishment of children during their education.

This is the source from which spring all the violent malignant passions of anger, revenge, hatred, &c.; this is the destroyer and exterminator of all their amiable and benevolent sentiments. It is the corruptor of the heart—it stupifies the head, and suppresses all talent and genius, breaks down the spirit of natural independence, and fits men for slaves, by exaggerating their propensity to crime, and annihilating all the fine feelings that lead to great and benevolent actions. All these fatal consequences are avoided by the nature of the system, not requiring any such barbarous means of execution, and rendering the substitution of reason in place of coercion, both easy and agreeable to both master and pupil; their natural curiosity is encouraged and excited, when the gratification of it is a pleasure both to the instructor and learner. Never being forced to do any thing they do not like, all their actions are bottomed on free will, and united with agreeable sensations. Their most complicated studies are but an amusement, which increases with the difficulties they encounter; and this concatenation of pleasurable ideas with moral study never ceases, and is the cause of their being at school during their whole lives; and the progress of their knowledge and improvement finishes only in the grave.

The boys learn at least one mechanical art: for instance, to set types and print; and for this purpose there is a printing press in each school, by the aid of which are published all their elementary books, all of which are constructed upon the contrary principles from those of the old school: viz. taking the most direct and easiest road to arrive at the end proposed, in place of the circuitous metaphysical method adopted by the old system, as if teachers were afraid of giving knowledge too cheap. By setting types they practice accurate spelling, and become familiar with the construction of all the languages which they print, and they can earn their bread in case of necessity. It is also a great source of economy to the school, and answers all the purposes of a recreation from more difficult studies.

The immense advantages of the system are more evident when applied to the great bulk of mankind; namely, the productive, labouring and useful classes. Those who from conquest, force, fraud, or the industry of their ancestors, are left with a sufficient revenue to live without labour, may remain in a state of ignorance. Perhaps this may be the fact, without injuring materially the state of civilization in the mass of society, as the ignorance of the class spoken of facilitates and accelerates the division of property, a state of things so necessary to general happiness, and to the elevation of mankind to the highest condition of moral and physical perfection. The pupils are capable of obtaining an accuracy of sight, which they acquire by a constant practice of measuring distance and dimensions, which gives them, when they leave the school, an experience equal to the acquirements of many years of instruction of an artizan; as they can, at a glance, decide whether a horse-shoe, a nail, a board, or any other piece of iron, wood, &c., will answer the purpose for which it is intended, without the trouble of trying.

They learn natural philosophy by the most improved and simple instruments; chemistry by the latest and most accurate experiments, never departing from the golden rule of proceeding from the most simple to the most compound; from the easiest to the most difficult; from the known to the unknown; and preferring the useful to the ornamental, making at the same time the application of all the necessary arts and occupations, that their utility may not be lost sight of for a moment.

One of the advantages attached to the system, is the facility of forming professors. The popish attribute of infallibility being exploded, the master loses none of his influence with his pupils by acknowledging that he is ignorant of the subject in question, but will learn it along with them, according to system, in accomplishing which, he has only to keep one lesson before the class, and the boys have a better chance to learn that particular science or art well, than if the master had been an old professor; for by learning it himself so recently, he is instructed in all the difficult places, and is more capable of teaching the children how to get over them—an advantage which the Lancasterian, or monitorial system, has over the old method.

Lithography being the best, cheapest, and easiest mode of making accurate representations of every thing, and this system requiring so great a number of exact representations, as they are in all possible cases substituted for books or descriptions, the pupils are all taught how to design on the stone or cartoons, and how to make the proper ink and pencils, as well as all the manipulation of printing and working the press, &c.

The advantages of calculating in the common way of reckoning by cyphers, is the smallest part of the great and beneficial mental improvement, gained by the calculation on memory, without the aid of any artificial figures, as it exercises, improves, and accelerates the combinations, and renders comparison easy and accurate; while it accustoms the young mind to rapid deductions, facilitates the drawing of just and accurate consequences, and lays the foundation for a quick, impartial, and logical judgment, in deciding on all questions of intricacy and difficulty, by furnishing to the mind the necessary elements to unravel the most complicated subjects.

The public are now generally informed that the Pestalozzian system of education has been introduced into this country by the public spirit and liberality of Mr. Maclure.

The following facts in relation to the actual state of the schools at Philadelphia, were communicated by him in answer to the inquiries of the editor:

Extract of a letter dated Philadelphia, Aug. 19, 1825.

Madam Fretageot's school has been established here four years next October; has 32 pupils, as many as she can take, and several are waiting for vacancies; she has already completed the education of some, whose parents thought them sufficiently instructed in all useful and necessary information.

Mr. Phiquepal began his school a few months ago; has 18 pupils, and will very soon have as many as he wishes to take—as the method requires more constant attention on the part of the instructor than that of the old schools, particularly at first; as the greatest part of the scholars have been treated differently by previous education, and have got habits that must be changed before they can be effectually benefited by the system. It would be necessary, to reap the full advantage of the method, that the children should be sent before they were at any school, except being taught by the mother, who would be aided much by a small book published by Pestalozzi, called the Mother's Manual. I have always thought that children cannot be put too soon to school, and the present practice, commencing in many countries of Europe seems to sanction it.

I have seen nothing printed about the system except Neef's Sketch, which is all sold. and scarcely a copy is to be obtained in this country, although 18 volumes have been printed at Stutgard, in Germany, on the Pestalozzian method, which sold so well, that the printer gave Pestalozzi 60,000 francs for his share of the profits. The above epitome is too short, but I like short books with only the outlines; they afford room for reflection, to fill up the vacuum, and stimulate thought, which fixes the subject more firmly in the memory, besides flattering self-love, (one of the strongest passions,) by authorising the reader to consider himself as author of all he reads or finds out by his own reflections. The fault I find with a great many books, is that mania of making things too plain, leaving nothing to cogitation, and treating too contemptuously the intellectual faculties of the reader.

LADIES' DEPARTMENT.

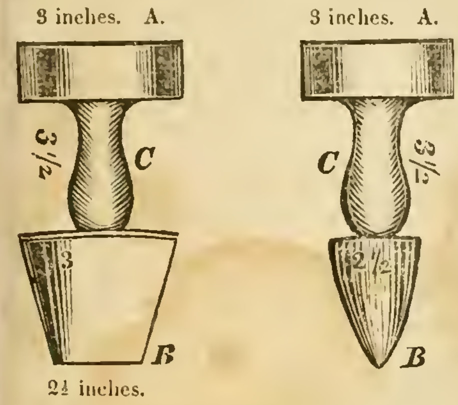
Our old friend and correspondent Solomon Simple! *Welcome again to the columns of the Farmer!*

Leghorn hats being expensive and very indispensable articles, as all husbands will agree; particularly as regards the former, and all wives as regards the latter; and money being now a days a scarce article, without which Leghorns are not to be obtained; I thought I could not render a more acceptable service to the community at large, and particularly the ladies, than by putting them in the way of making their old hats as good as *new*, by the following

DIRECTIONS FOR CLEANSING AND WHITENING STRAW HATS.

Take cold unsullied lye and first wash and rub the straw hat with it, then with a brush for the purpose, wash and rub the hat with boiling suds of lye, rench fine white soap, and lemons mixed together ıd boiled in a pot; after which wash the hat seve- l times with clear cold water, and when nearly y, stretch it on a wooden block of the size you ish the hat to be, then smootn it with a piece of ood made for the purpose; after which iron it, tak- g care to have the iron moderately heated to pre- nt scorching; when dry put it over the smoke of tea-spoonful of brimstone for three days, and it will gain take its colour and beauty as when new. For e hat as much soap as is necessary to wash a poc- t handkerchief will be required, and the half of a mon. The hat should be dried in the sun.

In braiding, that part of the straw within an inch the top, or near the first joint, is not used, as the rmer would easily turn yellow, and the latter, be- g hollow like a reed, would be apt to break—only out two inches of the straw is good.



The above are the appearances and dimensions f the instruments for smoothing the hats—they are ade of box-wood. A is a round head, flat and very nooth on the top. B. is of a wedge shape, smooth, nd a little rounding at the edge or bottom C. is f a size suitable to grasp with the hand. The brush be used should be a common soft clothes brush.

MISCELLANEOUS.

NEWLY-INVENTED SILK LOOM.

A loom has recently been made at Lyons for ilk-weaving, which has many advantages. It is omposed of five stages, and the mechanism, which simple, allows one man to weave five pieces at he same time. The loom has been examined by he Commissioners from the Academy of Lyons, in ompany with M. Jacquart, the inventor of that ort now in use, and which was imported into Eng- and with great haste, tending to prove its great dvantages. M. Jacquart is of opinion that the new nvention is of great importance, and he has point- d out some improvements in it. The inventor is l. Lebrun, and the Academy intends to confer a old medal on him. By this loom a saving will be ade of four-fifths in the expense of labour.

[*Courier Francais.*

LARGE ELM TREE.

The elm in Hatfield, Massachusetts, is supposed o be the largest tree in New England, it measures n circumference 34 feet, at 2 feet from the ground; t the height of 5 feet, the smallest place in the runk, the circumference is 24 feet, 6 inches. There s a cut in the tree 4 feet from the ground, which radition says was made by the Indians, for the high- st rise of water in Connecticut river.

TO SWEETEN A FOUL CASK.

Set fire to a pound or more of broken charcoal, ut it into the cask and immediately fill up the cask vith boiling water. After this, roll the cask once or twice a day for a week; then pour out the charcoal and water, wash out the cask with clean cold water, and expose it to the external air for some days.

Items from late English papers received in exchange for the American Farmer.

The large building in Gradwell street, Liverpool, occupied by Messrs Cropper, Benson, & Co merchants, and filled with nearly 2,700 bags of New Orleans and Bengal cotton, was destroyed by fire on Sunday evening, 16th October. The premises were consumed in a few hours, and the cotton, which was worth nearly 40,000*l.* either destroyed or damaged. It is singular, that within the last fortnight between 3,000 and 4,000 bags of cotton have been destroyed in Liverpool by fire.

The king of Wirtemburgh is doing every thing possible for the improvement of his kingdom and the condition of his subjects. He keeps 150 blood stud horses, and the consequence is, that beautiful horses are every where to be seen. He labours to improve all branches of the arts, agriculture, &c. He has established an experimental farm of 800 acres—is founding orphan schools, encouraging talent, &c.

In London the money market at the latest dates, continued as plentiful as had been the case for several months, and there was no particular pressure.

Reform.—One of the newspapers recently established by the mechanic interest, to promote reform, proposes that poor parents be allowed to strangle their children, or at least to sell them!

Miss Stephens succeeds Miss Foot at the theatre royal, Edinburgh. Miss Foot received 600 pounds for twelve nights. Miss Stephens received 1000 pounds for four nights at the music festivals!

THE FARMER.

Baltimore, Friday, December 16, 1825.

INTERNAL IMPROVEMENT CONVENTION.

Baltimore, Dec. 14th, 1825.

This being the day appointed for the meeting of Delegates from the several counties of Maryland to deliberate upon measures best calculated to promote the Internal Improvement of the State, at 11 o'clock the Delegates appointed by the several counties hereinafter mentioned, met in the chamber of the first branch of the city council of the city of Baltimore, appropriated for their accommodation by the Mayor of this city—Whereupon the meeting being called to order by the hon. J. R. Plater, of St. Mary's county, the Hon. Charles Carroll *of Carrollton*, was nominated by Governor Sprigg, of Prince George's county, and by the unanimous assent of the Convention, appointed to preside over their deliberations.

On motion of Daniel Jenifer, Esq., of Charles county, John S. Skinner, of the city of Baltimore, was appointed secretary, and Thomas Phenix, of said city, appointed assistant secretary.

The roll being called, the following gentlemen answered to their names, viz:

Frederick county—John McPherson, William Tyler, Grafton Duvall, Richard Potts, John Nelson, John Thomas, John Lee.

Alleghany—John McMahon, John McHenry, John Hoye, John Templeman, Andrew Bruce, Robert Swan.

Washington—Wm. Gabby, Thomas Buchanan, Wm. Fitzhugh, Col. John Blackford, Wm. Price, Thomas C. Brent, Franklin Anderson.

Anne Arundel—Thomas Snowden, Daniel Murray, Charles Carroll, of Carrollton, George Howard, of Waverly.

Harford—Israel D. Maulsby, John Forwood, Geo. M. Gill, Alexander Norris, Charles S. Sewall.

Baltimore county—General Tobias E. Stansbury, Capt. R. T. Spence, Elias Brown, James Howard, Gen. John S. Smith, George Harryman, Joseph N. Ford.

Baltimore city—Col. John E Howard, Thomas Ellicott, Isaac McKim, George Hoffman, Wm. Lorman, John P. Kennedy.

City of Annapolis—Dr. Dennis Claude, James Murray, J. J. Speed, Thomas H. Carroll, Jeremiah Hughes.

Prince George's—Samuel Sprigg, John R. Magruder, Robert W. Bowie, Major John C. Herbert, Major Wm. T. Wootten, William Bowie, of Walter, George Semmes.

Montgomery—George C. Washington, William Darne, Richard Holmes, Archibald Lee.

St. Mary's—John R. Plater, Peter Gough, Gerard N. Cassin, Joseph Stone, Enoch J. Millard, and H. G. S. Key.

Charles—Nicholas Stonestreet, Daniel Jenifer, Wm. D. Merrick, Gwinn Harris, Henry Brawner, John Ferguson.

Mr. Potts, of Frederick county, submitted the following resolution, which was concurred in:

Resolved, That the subject of internal improvement be referred to a committee of thirteen members, to be appointed by the chair, and to consist of at least one from each county and one from each city, with instructions to consider and report the expediency of addressing a memorial to the Legislature of Maryland, recommending a general system for improving the natural resources of the State, with a view to the general welfare of her citizens, and to her proper and becoming rank among her sister states.

Resolved, That this committee be further instructed to consider and report the ways and means in their judgment best calculated to effect this great and common object of the people of Maryland.

The Convention then adjourned to meet in the court-house, to-morrow morning at 11 o'clock.

Thursday, Dec. 15.

The Convention met agreeably to adjournment, when the following names were announced as of the members of the committee appointed under the foregoing resolution:

Richard Potts, chairman; John McPherson, Thomas Ellicott, Thomas H. Carroll, John McHenry, Daniel Jenifer, William Darne, Daniel Murray, Israel D. Maulsby, Genl. J. S. Smith, Thomas Buchanan, Samuel Sprigg, John R. Plater.

☞ Meeting of the Trustees of the Maryland Agricultural Society for the Western Shore of Maryland. We have not room this week to insert the proceedings of the Trustees at their meeting at Lexington, on Thursday last. Some modifications of the list of premiums to be awarded at the Cattle Show, in June next, were reported and adopted; and the whole scheme of premiums as adjusted and finally agreed upon, was ordered to be published in the American Farmer, which shall be done as soon as room and opportunity will allow.

The meeting adjourned to hold their next session at the residence of James Carroll, jun. Esq. in the city of Annapolis, on Thursday next, *the 22d of the present month.*

☞ The valuable address of Dr. Muse to the Agricultural Society of Dorchester county, will be published in the next number of the American Farmer, by order of said society.

Ohio Tobacco.—Prodigious extension of the culture of that article, contemplated in that state, as appears by the following extract to the Editor of the American Farmer, dated Putnam, November,

1825. The sample enclosed was very remarkable for the *fineness of the texture*, but the colour was rather of a green yellow than of that golden yellow which commands the highest price in our market. It would yet pay at present, a very ample profit, even without the facility of transportation, which, as the friend of *every* practicable scheme of cheapening and quickening our internal commerce, we hope to see afforded in the Ohio and Chesapeake canal.

"Sir.—Knowing the deep interest you take in whatever concerns the agricultural interests of our country, I take the liberty to enclose to you a specimen of the yellow tobacco raised in this county, and request of you the probable price per cwt. of such as the enclosed specimen.

"There has been a very considerable quantity raised in this county this season, and more in the adjacent ones. The probability is, that next year there will be an immense quantity cultivated. I should not be surprised if there should be 50,000 acres* planted. Should the price keep up, the prospects of our farmers will be truly flattering.

Very respectfully, yours, &c.

H. SAFFORD."

"The spirit of improvement is abroad upon the earth."

We take leave to record the following letter, just received from Jamaica, to show to our correspondents that their lights, which give all its value to the American Farmer, are not "hid under a bushel;" they are reflected to, and in their turn attract light from all quarters—and to compliments like the following, the Editor honestly disavows all title, but as he considers himself the organ of those whose contributions have caused the American Farmer to be sought in various foreign countries. To show the zeal and the objects of "*The Horticultural and Agricultural Society of Jamaica*," we publish the following list of premiums, to wit:

XI. That the following be the subjects for information, upon which prizes shall be offered; the communications to be sent to the Secretary by the 15th of November, 1826.

1. The progress and present state of agriculture in Jamaica, or in the other West India colonies.

2. The progress and present state of horticulture in Jamaica, or in the other West India colonies.

3. New methods by which the culture or preparation of the present staples of the island may be improved.

4. The diseases of horses, mules, oxen, and sheep in the West Indies, and the means of curing them.

5. The diseases of cultivated plants in this climate, and the modes of checking and of preventing them.

6. The natural history of the insects, birds, and other animals, most destructive to vegetation, and the most effectual means of hindering or counteracting their ravages.

7 The most economical modes of irrigating flat and mountainous lands, with the least waste of the nutritious particles of the soil.

8. The most economical and effectual modes of draining marshy soils.

9 Any valuable medical property in plants hitherto unknown.

10 The preparation of wine from the vine (*vitis vinifera*, and of vinous liquors from other fruits in the tropics.

11 Descriptions of plants not previously known, or known imperfectly, with their botanical characters, and with specimens of each plant described, if practicable.

12. The most advantageous modes of grafting in the tropics, with an account of the plants on which these modes have been successful.

The Society shall likewise offer prizes for the following objects

13. Improved specimens of esculent vegetables and fruits, whether native or foreign, raised in this island.

14 The introduction of any new and valuable plant, or esculent vegetable, or fruit. Specimens of each to be accompanied with an account of its history and cultivation.

15. The best specimens of wines made within the tropics, from the vine, or from other fruits. Not less than three bottles of each sort of wine to be sent.

16. To such persons of free condition, whether of colour, or black, and male or female, as may, through his own industry, have put the cottage he has inhabited, with a garden attached to it, into the neatest condition, a premium not exceeding two doubloons.

17. To a slave of either sex, for the same, a similar premium.

XII That the prizes to be bestowed by the Society shall consist of silver medals of two sizes, and of premiums in money.

Sir, *Kingston, Jamaica, June 27th, 1825.*

I have the honor of informing you, that a Society for the Encouragement of Horticulture and Agriculture, and the Arts connected with them, recently established in Jamaica, have done themselves the honour of electing you to be a corresponding member. I beg leave to transmit herewith a copy of the minutes of their first proceedings, which will explain to you the objects which the Society have in view. Permit me to assure you, that any assistance from you in furtherance of these objects, will be most gratefully received and acknowledged.

I have the honour to be, Sir,

Your most obedient serv't,

J. MILLER, M. D., *Sec'ry.*

J. S. Skinner, Esq.

Prospects for Farmers in 1826.—It is painful to learn, by gentlemen arriving here from different parts of the State to attend the Convention, that the prospects for a grain crop next year are more gloomy than they were almost ever known to be at this season. Fields, which it has been heretofore necessary to check by feeding down, present scarcely a sign of vegetation; so intense and long continued have been the drought and drying winds of autumn and winter.

Marketing.—Butter, lb. 25 to 31 cts.—Chickens, per doz $1.37½ to 1.50—Geese, 50—Turkies 75 to $1 25—Ducks, pair, 37½ to 62—Eggs, doz. 25 cts. —Beef, prime pieces, lb. 8 cts.—Veal, 10 cents.—Lamb, 5 to 6 cts —Pork, cwt. $4.50—Irish Potatoes, bush. 75 cts. to $1—Sweet Potatoes, 75 cts.—Turnips, 50 cts.

Tobacco.—Amount of inspections in the state warehouses, during the last week—66 hhds.

PRICES CURRENT.

ARTICLES.	per	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	6	11		
BEES-WAX, Am. yellow	—	33	35		
COFFEE, Java, ...	—	18	19	22	[illegible]
Havana, ...	—	15½	17½	18	[illegible]
COTTON, Louisiana, &c.	—	18	20		
Georgia Upland, . . .	—	15	16		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18	—				
CANDLES, Mould, . .	—	12	12½	14	[illegible]
Dipt, ...	—	10	11		[illegible]
CHEESE, ...	—	8	10	[illegible]	[illegible]
FEATHERS, Live, . . .	—	34		37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	3 50	
Shad, trimmed,	—	6		7	
FLAXSEED, Rough, . .	bush	1 10	1 12		
FLOUR, Superfine, city,	bbl.	4 75	5 00	6 00	6 [illegible]
Extra . . . . do.	—	5 12½	5 25		
Fine, ...	—	4 75	4 62		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	53	55		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	80	90		
do. Red, ...	—	80	85		
Buckwheat, ...	—	55	75		
Rye, ...	—	54	55		
Barley, ...	—	95	1 00		
Clover Seed, Red . .	—	5 00		5 50	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	bush	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36		
Peas, Black Eyed, . .	—	1 00		1 50	
Beans, White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	200			
HOPS, ...	lb.	27	29		
HOGS' LARD, ...	—	10		12	
LEATHER, Soal, best,	—	27	28		
MOLASSES, sugar-house	gal.	45			
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb	7		9	
NAVAL STORES, Tar,	bbl.	1 87½			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2			
OIL, Whale, common, .	gal.	32	35		
Linseed, ...	—	90	95		
PORK Baltimore Mess,	bbl	13 00	13 50		
do Prime, . . .	—	10 50		12 00	
PLASTER, cargo price,	ton.	5 37½			
RICE fresh, ...	lb.	3½	4	6	
SOAP, Baltimore White,	lb.	12	14	16	
do. Brown, .	—	5½	7½	9	[illegible]
WHISKEY, 1st proof, .	gal.	26	27	38	[illegible]
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37½	50	
SUGARS, Havana White,	c.lb	13 50		15 00	16 0[illegible]
do. Brown, . .	—	11 00			
Louisiana, ...	—	10 00	11 00	11 50	12 5[illegible]
Loaf, ...	lb.	19	[illegible]	20	[illegible]
Lump, ...	—	16	19	19	
SPICES, Cloves, ...	—	80	85	1 00	
Ginger, Ground, . . .	—	7		10	
Pepper, ...	—	18		25	
SALT, St. Ubes, ...	bush	42	45		
Ground Alum, . . .	—	50		65	
SHOT, Balt. all sizes,	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal	2 50	3 00	3 50	4 [illegible]
do. Sicily, . .	—	1 20	1 25		
Lisbon, ...	—	1 20	1 50	1 62	1 75
Claret, ...	doz	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	[illegible]	35		

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* This would probably be more than is cultivated in all Maryland and the effect may be easily imagined. We shall send some samples of our best tobacco, with the present prices annexed, to our correspondents in Ohio, to serve as standards of comparison and judgment.

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AGRICULTURE.

AN ORATION

Upon the dignity and utility of the art and science of Agriculture—delivered before the Dorchester Agricultural Society, and a numerous audience, at their first Exhibition and Fair, held in Cambridge, Nov. 10, 1825—by Joseph E. Muse, M. D. *President of the Society.*

[Communicated for the American Farmer.]

This day, gentlemen, will constitute a *glorious epoch* in the *annals* of Dorchester county, *this day,* the *first,* on which the cultivators of our soil have convened, to receive the honourable badges of successful emulation; and to deliberate on and systematize schemes of agricultural improvement, will establish an *anniversary*, which will command the *respect* and *admiration* of our children; because, it will promote their *wealth* and *happiness;* and perpetuate their fathers' *monument* of *independence* to *ages unknown;* for, *agriculture* is the *base* of *national wealth;* and *national wealth* of *human liberty;* as the arms of our beloved country, united in architectural strength and beauty, they constitute *one colossal column*; "unum e pluribus," the *base* of *agriculture*, the *shaft* of *wealth,* and the *capital* of *human liberty.*

To trace minutely, the history of agriculture, would be a useless occupation of time. A mere sketch of the veneration in which it has been held, from the earliest ages, through the labyrinth of antiquity, would be a tedious and unavailing labour; it is sufficient to know that at *all times,* and by *all nations*, the art of agriculture has been admired as the first and best occupation of man. The earliest history of the eastern nations establishes their knowledge of and respect for this noble art; by which they supplied themselves with the necessaries and luxuries of life.

The Chaldeans, who inhabited the *native* country of agriculture, had, by assiduity, attained to considerable perfection in this valuable art. The Egyptians regarded it as a divine blessing, immediately conferred upon them, by their god Osiris, and worshipped in superstitious gratitude their *beasts* of the *plough;* and the Persians embraced it among the *precepts* of their *religion;* striking instances of its ancient and exalted *dignity.*

In the darker ages, which obscured and depressed the human mind, agriculture languished with the other arts; as soon as the faculty of reason began to dawn, and by its overpowering rays to dispel the rude and barbarous cloud, the benign genius of agriculture is again conspicuous, exerting her salutary and beneficent energies for human comfort and happiness; she has flourished in all ages, *pari passu,* with the civilization of man; she has sunk into obscurity with the debased and barbarous mind; with the revival of letters, and the improvement of the human understanding, the *tutelar genius* of *agriculture* has again been adored, *next only* to the great God of nature, who conceded her to fallen man as a pledge of his divine benevolence.

Does it excite astonishment, then, that with this established character of agriculture, the present age, with all its mighty and successful efforts to ameliorate the condition of man; with all its rapid strides to perfection in the various departments of art and science, has not neglected this great boon of providence; but has, by unanimous consent, placed it in the first order of human employment, in reference to the beauty and extent of the science, and the benefits to mankind, resulting from the practice.

While agriculture was consigned to the charge of *sloth* and *ignorance;* while the only principle of action was the *custom* of *forefathers*, without adverting to the physical and moral necessity of improvement, or the peculiar circumstances under which those customs were adopted, *agriculture, reproach,* and *ignominy,* were synonymous epithets; the farmer was despised as a *plodding fool,* a fit companion only for the beast, which dragged his reluctant plough; but now, that the human mind has expanded above those grovelling notions; when *reason* is connected with *action;* when the art is becoming founded in science; and elementary principles becoming developed by observation and experience to guide and instruct the farmer, to render intelligible what he may discern in the sphere of his profession, and conduct him to rational inferences; *now,* since this *happy revolution;* since the *faculty* of *reason* has acquired the supremacy in this great department of human affairs, the *farmer deservedly* ranks as a gentleman of the *first order* in society; his profession is *honourable, learned,* and *useful;* it peculiarly conducts him, in his studies and reflections, to the great and wonderful operations of nature; it inclines him to investigate their causes, and affords him a *delight,* of which none others can so largely participate.

The *theory* of agriculture cannot yet be said to be fully established; hence various and opposite theses of vital interest; we must not, therefore, hesitate to examine new doctrines, to detect errors, or suggest what we consider truths, because of the fallibility of human reason; we should not encourage distaste for *theoretic inquiry*, because the human mind has been led into error; by those very errors and their consequent detection; by new facts and new theories we arrive at our final purpose, the truth which we have desired.

To attempt the delineation of a system of agriculture preferable to any other, when I am addressing an audience of much eminence and experience, would be presumptuous; yet I shall take the liberty, conferred by the office with which you have been so kind as to honour me, to offer a few concise suggestions on some of the most generally interesting topics in relation to agricultural improvement.

I am aware, gentlemen, of the prejudices existing in the minds of many against *theory* in agriculture; delude not yourselves with this too popular sentiment; *without theory*, the *life* of *science,* no art can attain to perfection. Anomalous, indeed, would be the case, were agriculture to grow and flourish in ignorance, without the aid of science, without system, without a knowledge of elementary principles; these enable us to shun the quicksands of error, and lead us *through experience* to *truth;* as lighted beacons to the benighted navigator, which preserve him from rocks and shoals, and conduct him in the channel of safety to his destined haven.

I do not contend that every farmer must be a theorist, or every theorist a farmer; but that by the influence of science, all arts and professions have flourished; and *without* it they have languished; they are different departments of the same institution; co-equal and co-essential; as the muscle and the nerve in the human economy, the one *directs,* the other *performs;* the one exerts a *moral,* the other a *physical* influence

By means of agricultural science, we understand the constitution of soils, and their various defects; the nature of manures, and the mode of their operation; and necessarily, their peculiar adaptation to supply the defect of an absent substance, or to neutralize, nullify, or perhaps render wholesome and useful to vegetation present substances of the most pernicious qualities. Has your soil acid? destroy the poison by alkaline matters. Is the acid sulphuric? by lime you convert it into plaster of Paris. Has it a metallic salt, a vegetable poison? by lime you decompose it, and render it innocuous. Has it a cohesive clay? by *burning* you render it friable and pervious to the extension of the tender radicle; you produce a substance which I have denominated the "*deutoxide* of *aluminum,*" with new chemical properties, which I have explained on another occasion, highly conducive to vegetable life and growth; one, whose *universality* and *excellence* will be recognized at a future day, by the farmer of energy and enterprise, among the greatest favours of God to man.

This subject in general, of the science of agriculture, is one of infinite beauty and interest, but too attractive, and too diffuse, for the bounds of a limited address, and I shall confine my remarks to as few topics, and within as small a compass as the nature of the subjects will admit of.

Next in succession to a view of its dignity, beauty and utility, is naturally associated the correlative idea of the means best adapted to the promotion and perfection of the art and science of agriculture; and upon this subject, though copious, I will venture to ask your patience, but for a few moments.

It is obvious that *information* is the first pillar of this magnificent edifice, and equally so that it must be derived from the accumulative resources of the many; did this proposition require support, it would be found in the rapid growth of the arts and sciences from the invention of printing; the facilities which this noble art has afforded to mankind for the acquirement of knowledge, it would be idle to dwell upon, and that it has contributed to the knowledge of agriculture, as well as other objects of human attention, history affords us ample testimonies; and that books on agricultural subjects, are a fruitful source of this knowledge, seems undeniable. Periodical publications, devoted to agricultural subjects, conducted with talent, and of widely extended circulation, afford boundless means of popular instruction—of this source of knowledge and information, the American Farmer, published in Baltimore, by Mr. Skinner, is an instance, which reflects honour on the state; by this medium, for the small price of five dollars per year, the aggregate *knowledge, observation* and *experience* of millions are faithfully conveyed every week in the year, to the subscriber's door.

Agricultural associations, such as we have now instituted, affording frequent opportunities of a familiar interchange of hypothetic sentiments, as well as of practical results, and exciting by proffered badges of victory, a meritorious emulation to excel in points of the highest local interest; must of necessity operate, as a *mean* of *improvement*, as a *bond* of *social harmony,* as a *fountain* of *knowledge* and *information*, whose wholesome, ethereal waters will refresh and invigorate the body and mind of the *thirsting farmer,* who may *indulge* in the *luxurious potation.*

In regard to particular objects, I shall perform my duty by noticing chiefly, such as peculiarly concern our local interests; the improvement of our soil; manures, and their application, are topics so trite that to *name* them is almost plagiarism. Yet I will take the occasion to state a fact within the sphere of my own private observation, viz: That upon the careful analysis of several fields of my own, of different characters, with argil and silex in various proportions, some possessing lime, and others not a particle of it, I have found, that, *cæteris paribus,* those containing lime, though in minute quantities, are *most disproportionately* productive: yet, one containing an excessive portion of it, was obviously impaired by it, and did not discover the effect of usual manuring, so glaringly as the rest. And though this result is in contradiction of the sentiments of an English farmer of much celebrity, (Mr. Anderson,) who has used from seven hundred to a thousand bushels to the acre; and pronounces its effect, in promoting the fertility of a soil, to be almost infinitely *pro rata*, with the quantity employed; yet the result of my experiments leave no doubt on my mind, that the use of lime in unlimited indefinite quantities, will be highly injurious.

Our resources for lime and other calcareous matters, are unfortunately small. We have found in Dorchester *no marl;* nor have we limestone; yet we have many banks of shells, perhaps sufficient to supply the *small* demands which, from my experiments, satisfactory at least to myself, our lands may require.

With respect to marl, hope should not vanish; our exertions to discover this hidden treasure. should not be abandoned. In Talbot, beds of this substance have been found, only within a few years; and new discoveries since, frequently made, where it was not conjectured to exist, have added considerably to the wealth of that county. I earnestly conjure you to devote a small portion of your time to this important subject; with a view to it myself, I have constructed an instrument, (an auger with a long shaft,) to bore for marl, which I confess I have, as yet, used without success; I have now lengthened the shaft, by additional bars to be attached, by screws, *ad libitum et infinitum,* and I have no doubt will succeed in future attempts; though, at the points of discovery, the marl may be deposited too deep in the earth for convenient use; yet it may thence, be traced to more superficial and accessible strata.

In regard to the application of farm-yard manures; whether in a recent or rotted state, I presume that, in due decorum and respect for the worthy advocates of the latter doctrine, it must still be classed among the moot points of agriculture; yet in a country like ours, where the fallow crop possesses sturdy powers of digestion, with a capacity to assimilate the coarser food for its nutriment, and to leave the finely elaborated and more delicate particles for the repast of a more tender and more luxurious family, I do not hesitate to adopt the doctrine and practice of *recent* manures, whereby the medium and process of preparation becomes an object of profit; the work is as well done, the ultimate and timely preparation of the manure, for wheat, or other small grain, is as well accomplished; and you receive for your trouble an immediate and valuable compensation, which is otherwise totally lost. In support of this doctrine, which I have long espoused, *chemistry* offers her strong and helping hand, but I will not, upon this subject, at present trespass longer on your patience.

Auxiliary to those of a calcareous nature, and the large class of decomposing animal and vegetable matters, are many others, which the enterprising farmer may discover, perhaps, in the *vicinity* of his fields. The rich black loam of swamps, marshes, and bottoms, abounding in carbonaceous matter, whose strong affinity for the oxygen of the atmosphere, results in a solution, (carbonic acid,) the most powerful agent of vegetation; the heads of coves, and the mud bottoms of ponds, which have served as receptacles of the richest principles of the neighbouring lands for ages past, are invaluable sources of manure; yet from experiment I can assure you, that these are frequently vitiated by the presence of sulphuric acid, which must be neutralized, in compost, with the saline offal of the farm-yard; or, by lime, or other salifiable bases, blended with the heaps, which latter method will be found equally effectual, and more convenient.

The muriate of soda (common salt,) has had its encomiasts; with what propriety, my experience has not instructed me, or rather contradicts it; from four to eight bushels per acre is said to have produced fine effects, and particularly on grasses; it is highly septic, in small quantities, and may operate, by converting coarse vegetable matter into digestible food; so small are the mouths of the absorbent vessels of plants, that they can imbibe no nutriment, except it be in a state of solution; the *particles* of *impalpable* powder are too large to be admitted by them; salt in many instances promotes this solution; salt is also, deliquescent; it attracts the moisture of the atmosphere, which property may be easily conceived as contributive to the growth of vegetables; to this substance (salt,) may perhaps, chiefly, be referred the benefits derived by some from sea-weed, which by the experiments of Dr. Davy, give about four-fifths of its weight of water, and should therefore be spread and ploughed in a recent state.

Vegetable substances of a ligneous nature, applied to the purposes of manure, require before use a partial decomposition. which may be produced speedily by quick lime; or, more slowly, but equally well, in compost; but animal substances are converted by lime, into an insoluble mass, therefore lime will prove pernicious to a compost containing much animal matter.

Next in order, as a feeble disciple of the Mantuan farmer, who is worthy of our studies and imitation, and an accomplished prototype, the planting of fruit trees should occupy a share of our attention. Our orchards are neglected; the fruit propagated in the country, is generally so infamous, as to demand extermination, and the substitution of new trees of choice sorts, *or,* the *budding* and *engrafting* of the best fruits of our climate, upon the *old* stalks of worthless kinds; in three years the transformation may be effected, by the latter method. In place of the present growth of the sickly, insipid fruits of our country, we may, with little exertion, find ourselves, *as if magically,* possessed of delicious fruits, a source of health, luxury and profit.

In regard to the condition of our flocks, I am conscious I shall receive the undivided assent of my audience; our local necessities most imperiously demand relief in this important and neglected article. We should procure new breeds and improve their progeny by careful and generous treatment; fallacious and narrow is the judgment which would exclude from premium a high blooded animal of fine points and valuable character, because it has been imported; because it has been obtained for the benefit of the country at great cost and trouble. The end in view is not individual gratification, but the public good; and this end is better attained by the importation of superior (*if* RESIDENT) than by our own inferior breeds; and therefore it should be encouraged by the utmost abilities of the Society.

While on this subject, I must advert to a seemingly interesting question, agitated for some years, and still unsettled, viz. the comparative value of the horse and ox for the plough and wagon. The question may be one of interest to other climes, but in ours, I fancy, no doubt can exist: the ox may perform a portion of tardy and rugged labour in *cool* weather; but in our long and hot summers, the farmer will, from my experience, find himself compelled to resort to horses. The ox is not designed by nature for *violent* exercise in *hot* weather; he is deficient in that "*vis medicatrix naturæ,*" that "*heat counteracting power,*" of *sweating*, which horses possess in an eminent degree; his skin is not constructed for this refrigerant action. When overheated, he lolls out his tongue and slavers, and shortly succumbs to the overpowering effects of heat. The ox, too, is classed naturally among the slow-footed animals. The horse has a quick step, and will perform more work at the plough than the ox at any season, and vastly more in hot and sultry weather; and where labour is dear, and time precious, the *surplus* of his performance above that of the ox, will be found to be much more than equal to the value of the meat and hide of the antiquated beef, and will fairly justify his master to allow him in his old age, the "*otium cum dignitate,*"

> "In peace, t' enjoy his former *palms* and *pains;*
> And *gratefully* be kind to his remains."

The mule, I conceive to be totally unworthy of notice, except for detestation. He is, with few exceptions. vicious, and comparatively worthless; in the plough he is unable to compete with the horse, and in the shambles with the ox; he is neither fit for the one purpose, nor the other.

The subject of *crops*, the great object of our inquiries and our labours, is too copious to be embraced within the narrow limits of a short address, and too important to remain wholly unnoticed. The many disasters incident to our wheat crop, the *great staple* of our county, the *reliance* of the landlord and the tenant; and moreover its reduced value. when by chance it may have escaped those disasters; the insignificant value of Indian corn, as an article of sale; and in fact, the general *absence* or *paucity* of *monetary means*, indicate the obvious necessity of adding, or substituting, a new series of crops, which may be less precarious, and more profitable.

After as full an inquiry, and research into the subject, as perhaps it admits of, without experience, I have determined to make the ensuing year, a large experimental crop of fifty acres of cotton, which, from my small experiment the present season, will afford an abundant and profitable crop, before the accession of frost; which period is becoming, annually, later, from the *draining*, *clearing*, and other physical causes operating a vast revolution in the general climate of our country—having made a difference, of at least three weeks, within the last ten years; and thereby affording fair prospects of a successful growth of cotton.

Palma Christi will form another member of the new series of crops which I contemplate an experiment upon, the next season, and will, I anticipate, be a productive and profitable one.

Independent of other advantages, which the introduction of these and other crops may possess over the limited number that we now cultivate, that of *multiplying* the *varieties,* is one of considerable importance; by these means, the principles of rotation, the most unequivocally essential discovery, grown out of the science of modern agriculture, will, necessarily, be more extensively and usefully applied; the selection of soils and subsoils in reference to their peculiar adaptations to their favourite plants, will be proportionally facilitated.

The boundless growth of vegetables designed for the use of man, and other animals, are comprised in two opposite and distinctly characterized families; the one having small leaves and few in number, which dry and wither before the crop is matured, derive their nourishment chiefly from the soil, and render it hard and dry—these are called *culmiferous*, and are great exhausters of the soil; to this family, belong wheat, rye, oats, Indian corn, &c.; the other, having broad and abundant leaves, which continue green, succulent and growing, till the crop is cut down, and bespeak the continued agency of the foliage, in the sustenance of the plant, renders the soil *soft, mellow*, and *open*—these are called leguminous, and operate to correct the hard, compact, and cohesive soils. Of these two families, the members, though possessing the *generical* character, may be presumed to vary in their respective powers, and in many important and specific points; *some* delighting in clay, *others* in sandy soils; *some* in upland, *others* to be immersed in water;

> "Fluminibus salices, crassis que paludibus alni;"

Hence inevitably, the advantages accruing to the agricultural community, from the introduction, of as many new and valuable crops, as our climate and soil may be found capable of producing.

From the established principles, upon which *rotation* is founded, it must be inferred that each plant has its respective pabulum; that though this may be constituted of the same elements, yet it must consist of different proportions of those elements, and of different chemical arrangements; otherwise the different products would be totally unaccountable; the *acidulous* plant, for instance, must abound in *oxygen*, the *acidifying* principle; the *oleaginous* will claim an excess of *hydrogen;* the *saccharine* of *carbon*, &c; *because*, these elements are, respectively, the chief agents in the production of those results which those plants are known to afford; and, *a posteriori*, the pabulum requisite for their physiological functions must have been constituted of a large proportion of these respective elements.

It is repugnant to reason and analogy, to suppose that the deadly upas, and the fragrant magnolia, the poisonous lobelia, and the healthful cabbage, should derive from the same food such opposite qualities; the conclusion is irresistible, that they have respectively their favorite elements, on which they more heavily draw for their sustenance, and from a continued annual demand, by the same plant, of the same element, from the same soil, exhaustion, *quoad hoc*, must be the inevitable consequence; whereas, other plants, needing other elements, may find an ample supply; hence the necessity of *rotation;* of a *varied succession* of crops, beyond the contracted sphere of our present practice.

One other subject demands our serious attention; the *reclamation* of our marshes and cripples, capable of becoming the most valuable lands we possess.

An example has been offered us by those enterprising gentlemen of South Carolina, who have commenced this meritorious and inestimable work, on the Nantikoke. On a late visit to one of those gentlemen, who has built his dwelling house in the midst of an infinite marsh, late the dwelling of muskrats and otters; where rushes, reeds, flags, and other *worthless marsh* grasses only grew, I found him comfortably established in the centre of two hundred and thirty acres of reclaimed marsh, dry and firm; growing a crop of Indian corn which is estimated at forty bushels per acre; a garden of many fine and luxuriant vegetables, cabbages, tomatoes, and roots of most of the usual kinds, and a small parcel of cotton, which looked well; the wheat in his corn ground had a fine appearance; his rye field was preparing by a drag, with nine heavy incisive teeth, without previous ploughing. The whole plat was not in cultivation, yet there was not a vestige of *marsh growth* to be seen any where upon it; the parts not in crop were richly clothed with the *anthemis cotula, hypericum*, and other *upland* weeds; indicating a thorough physical revolution in the constitution of the soil, and the *mystic* conversion of worthless mire and bog, the haunt of noxious animals, into the *alma mater* of man; a noble example, which if adopted in regard to our marshes on the *Black-water* and *Transquakin rivers*, would render the interior of Dorchester the *most beautiful*, the *most healthful*, and the *most valuable* portion of the county.

Finally, a subject remains, but little regarded, yet closely connected with that of crops; and deeply interesting to the farmer; because the knowledge of it may be essential to their preservation, when his labour and money may have been expended on their production; I mean the hazard of their destruction by *spontaneous combustion*, when housed or stacked, too recently, in a green and succulent state. An instance this season has occurred in my farm-yard, where many large stacks of top-fodder were discovered by accident to be strongly heated; upon examination, I found in the centre of each of them, and near the earth, bushels of carbonated stalks and blades, in different grades of ignition, which, when exposed to the atmosphere, was with difficulty prevented, by the active efforts of all the labourers on the farm, who happened to be near at hand, from bursting into a *furious inflammation.* A majority of these stacks had received no rain in the curing, yet were as much affected as those which had been wet; a strong instance of the fallacy of the opinion, "that *water*, more than the *juices of the plants*, promotes spontaneous combustion;" the oxygen of either is copiously and readily separated and absorbed by the carbonaceous matter of the plant; heat and hydrogen are developed; and the consequences are *fatal* and the *same;* which I truly hope, gentlemen, none of you may ever experience.

P. S. A very fine wheat soil at my Appleby farm, contained, in 400 grains—

		grains.
Water of absorption, ...		14
Coarse sand, separated by water—		
sct. silicious, ...	266	
calcareous, ...	13—	279
The lixivium gave vegetable extract		6
Fine matters suspended in the water, yielded in solution of muriatic acid—		
sct. ox. iron, precipt'd. by Pruss. potass.	3	
carb. lime precipt'd. by carb. potass.	6	
carb. magnes. precipt'd. by boiling, ...	3—	-12
Fine matters not acted upon by muriatic acid were burnt, and lost by burning—		
sct. vegetable and animal insoluble matter, ...		24
The residuum acted upon by sulph. acid, yielded—		
sct. alumina precipt'd. by neut. carb. amm.		13
iron precipt'd. by boiling, .		00
silicious sand left and not acted upon by the sulph. acid,		37
		385
Lost, ...		15
		grains, 400

The other soil mentioned was much the same, but contained not a particle of lime, and is not half as productive, though equally manured.

ON THE PROFITS OF SHEEP HUSBANDRY.

Washington county, Pa., Dec. 10, 1825.

Mr. Skinner,

It is not an uncommon thing to notice persons similarly situated, entertaining very different views of the same subject. I am, therefore, no way surprised to observe a writer over the signature of C. in the Farmer of the 25th November, differ so widely from my estimates on sheep and horses, which appeared in the Farmer of October 14th. However, I take it for granted, that C. resides in a district of country where fine horses command a much higher price than they bring with us. I think I am warranted in making this conclusion by the price he fixes on his colts—they average $233.33 cents per head Nothing like this has ever been realized in this part of Pennsylvania, and I must be permitted to add, that an extraordinary revolution must be effected in the taste of our farmers before it can take place. In this part of Pennsylvania there is no demand for turf horses. The plough, the wagon, the stage, and even the carriage, in our hilly country, requires more *weight* than full blooded English horses generally possess. We find the most useful horse for general purposes, is derived from our large mares and the *pure blooded* horse.

As it respects my estimate on sheep, I am well aware that they will not hold, at any considerable distance north of us, where the winters are severe, and the ground in that season generally covered with snow. However, I will reply to C. principally by stating some *plain facts.*

In Virginia, when sheep have an extensive range, they eat very little hay. Here, we are rarely obliged to feed before the first of December, and but partially after the middle of March; so that our feeding days, instead of 150, as estimated by C., seldom exceed 120. It is now the tenth of December, and my flock of about 950 have not, as yet, consumed one half ton of hay.

Our winters, of late, have been usually very open; and I find my sheep, unless the ground be covered with snow, prefer the roughest grass, which they had rejected in the summer, to the best salted hay. If experience and success entitle any man's opinions to weight, then are the opinions of Mr. Dickinson, of Steubenville, on the subject of "sheep raising," to be received with deference. He stated to me, that when he had five or six tons of good hay for each hundred sheep, he felt perfectly safe. The opinion of every large sheep owner with whom I have conversed, agrees with that expressed by Mr. Dickinson.

With respect to the labour necessary for a flock of five hundred, I observe C. and myself disagree; and in reply, I would just state, that I have had about that number under the care of one man during the last year. Since shearing time, he has done nearly as much work on the farm as any man in the township. I am very certain that the flock during the summer has not occupied the one-sixth of his time. He sees them every morning, salts them twice a week, and changes them from field to field, as it becomes necessary. During the winter months, he has an assistant. By 8 o'clock they have the racks filled, and in good weather are engaged in repairing fences, &c. until about two hours before dark, when they again repair to the sheds and supply the racks. For about a month in lambing time, the ewes require the constant attention of one hand, and sometimes of two, and it is often necessary to be up three or four times during the night.

In reply to the remark, that "they must be superior sheep to produce wool worth 2 dollars per fleece," the most unquestionable evidence can be furnished, that all our good flocks exceed that sum. Although about one-third of mine are only seven-eighths, and a few as low as three-fourths, my last shearing sold to B. Wells & Co. at an average of 2 dollars and 15 cents.

From 100 ewes, C. remarks, he "cannot raise more than 50 lambs." My estimate was 75. Let it be recollected that I value the ewes at 10 dollars each. I think it might be fairly inferred from this, that none of them were *very old*, as this is more than such sheep are worth. I have pursued the same course in this as in the other parts of my estimates, and taken some pains to ascertain the opinions of those who had the best opportunities of correct information. I found some difference as to the precise number, but all agree, that under favourable circumstances, 75 is a low estimate. However, as "facts are stubborn things," I will state one which will go some length to prove that 75 is not too high an estimate. About the first of March last, being apprehensive of a scarcity of pasture, I picked out 100 of my *oldest* and worst ewes, which I offered for $500. *Fortunately*, I did not succeed in disposing of them. I had them kept separate from the flock, and treated with some additional care. They raised for me *eighty-six* fine lambs, for which I have refused six dollars per head.

It may not be amiss to state that the western counties of Pennsylvania are extremely well adapted to keeping sheep, and that more care is bestowed upon them than is usually given to them on the eastern side of the mountains. I am rather disposed to adopt the opinion entertained by many, that they are less liable to disease than any where else. The result of the matter is, that I have determined that your correspondent C. is a better horse-master than shepherd. Although I may not succeed in convincing him of the accuracy of my estimates, I wish him to be assured that it will give me sincere pleasure to afford him any further information as to the management of sheep. B.

GRASS SEEDS, TO BE SOWN.

(*From the Agricultural Almanack for the year* 1826, *patronized by the Philadelphia Society for promoting Agriculture.*)

The proper quantity of grass seeds to sow, per acre, is a point of the greatest importance, as regards the expense of the seed, and the speedy formation of the most valuable sward. The circumstances of soil, tilth, and weather, at the time of sowing, all influence, in a great degree, the successful vegetation of the seed. Should less seed be sown than is sufficient to furnish every part of the soil with plants of grass, a proportionate loss of time, labour and land will be suffered. Minute vacancies of plants in a recently-made pasture, or in a field of seedling grasses, may, to general observation, appear insignificant, or escape observation altogether; but if these apparently minute deficiencies which occur over the surface of an acre be calculated, a difference, perhaps, of from ten to fifteen per cent. in the produce, will be found to exist between a perfectly furnished surface of land, and one where the deficiencies of plants are so minute as scarcely to be perceived. In the most productive natural pastures no deficiencies of plants are to be found, every part of the surface is closely interwoven with plants; and not as in pastures artificially formed of one or two species of grass only, where the surface is merely shaded or covered by the foliage of the comparative thinly-growing plants. A rough uneven surface will require a much greater quantity of seed, than land with a dry, finely pulverized, smooth, consolidated surface. If the surface is wet at the time of sowing, a greater quantity of seed will be required than otherwise would be necessary. The seeds of most of the essential permanent pasture grasses are so small and light, as to be readily taken up in clumps by the barrow or roller passing over a damp surface.

[Sinclair's *Hort. Gram. Woburn.*

Grass seeds are often defective in quality; are seldom sown in sufficient quantities, and they are very rarely put in with proper care. Accurate husbandry is more essential for the proper laying down and management of grass lands than any other branch of the agricultural art. Fine tilth—careful sowing—ample supplies of manure, are especially requisite in a country exposed to extreme cold and excessive drought. Autumnal sowing has generally been found most successful; but the practice of sowing clover upon wheat and rye crops, must necessarily be continued in the spring. A light harrow, with wooden tines, should, in all seasons, be used for covering grass seeds. In the spring, the wheat and rye crops are benefited by its application: their roots, which are often diseased from being thrown out by the frosts of the winter, are brought into contact with fresh earth. The grass seeds are covered by the aid of the harrow: a very light roller, after, by slightly compressing the earth, secures to the tender germs nutrition, at the moment when it is most required, and fills up the interstices immediately about the roots of the plants, upon the products of which, the farmer's hope principally depend. J. H. P.

LIVE STOCK—SHEEP.

Of the various breeds of sheep designated in Pennsylvania as English, Irish, Bakewell, and Tunisian, none can be found of pure blood. The variety called Bakewell, Dishley, or New Leicester, in England, are remarkable for arriving early at maturity; carrying very long and heavy fleeces upon compact carcasses, with flat backs, short legs, small heads; producing very large quantities of fat, with small portions of flesh—so little remarkable for good flavour, that it is seldom consumed in Great Britain by the more wealthy classes of people. They are so sluggish, and from the peculiarities of their form, are so little enabled to make exertion, or to endure the ordinary difficulties of exposure, that they are confined to the most fertile vales, and are protected by incessant vigilance and care.

The different flocks of sheep called Bakewell, which are found in New Jersey, Pennsylvania, Delaware and New York, are a mongrel race, derived principally from an importation of Dishley, Teeswater, and Southdown sheep: or from a few Teeswater sheep, which were carried to New York in a prize, during the late war. The characteristics of these breeds, are occasionally detected in individuals of this race. The smutty faces, finer wool, and smallest frames, are indicative of the Southdown origin; the largest frames, coarser bone, heavier offal, and larger heads, mark others of the Teeswater race; the long wool, often twisted at the ends, the narrow faces, broad backs, short legs, and fine bone, prove the presence of the Dishley, or Bakewell blood.

The sheep called Irish received their name, I apprehend, as they were exported from Ireland; but I am induced to think they were of Lincolnshire breed, crossed probably with Southdown blood. The Tunisian sheep had many valuable properties; but they were exceedingly improved by the sagacity of Mr. Thomas Bones, who discovered that their forms might be much amended, and that their *unwieldy* tails might be diminished, whilst their hardy constitutions, and capacity to endure heat and support cold, might be retained. His sheep, so improved, by crosses with Irish and Southdown blood, *were much better* than any of that race, *which I have ever seen* in this or any other county of the state.

The greatest objection to all the varieties of broad-tail sheep, proceeds not only from the excrescence so much valued by certain *amateurs*, but from the bad quality of their wool. Excepting those "for which Pennsylvania is indebted to the liberality of Colonel Pickering," I have seen none, whose fleeces were not hairy, and decidedly bad.

The Teeswater sheep are the largest in Europe. They are slow feeders—*tallow* well within—carry more flesh, less fat without; but produce much worse mutton, and much heavier offal, than the Dishley breed. Their fleeces are heavy, and afford, in common with the Dishley, what is called combing wool, fitted for the manufacture of camblets, and various articles of worsted. The Southdown sheep are much smaller than the Dishley—they are more hardy—their wool is short, equal in quality to that of half bred Merino—their fleeces are not so heavy—they carry more fat within, and much more flesh without, than either the Dishley, Tunisian, Irish, or Teeswater sheep. By their activity, and vigour both of muscle and constitution, they are fitted to encounter every difficulty, as well as to endure the extremes of heat and cold. They occupy, in England, one of the most exposed and least fertile portions of the island—their mutton is of the finest kind, and commands the highest price, although from the properties of the sheep it can be produced at least cost.

There is no mistake more prevalent, and none more egregious, than that which ascribes excellence *to great size.* Unless it be had early, and at comparatively small expense, large size does not more determine the extent of usefulness in the quadruped, than in the man. Weight is not always ascertained by size—a small keg sometimes weighs more than a large hogshead. Weight is affected more by compactness, and squareness in certain parts, with rotundity of the barrel, than by mere extension of the frame. If the hind quarters be *long, deep,* and *wide*—the shoulders be *placed well back*—the *breast be ample*—the brisket be protruded—the back be broad—*the loins wide—the girth behind the fore legs and over the chine, be large,* the animal must possess not merely the frame which weighs most, but the form which carries most weight in the valuable parts, and affording sufficient room for the action of the lungs; without which, health and thrift can be seldom found.

Some animals have good forms, but are "*shelly,*" as it is technically termed, conveying the idea of the absence of the due quantity of flesh. Some breeds produce too much fat, in proportion to flesh: those which carry comparatively a large quantity of flesh, "marbled when ripe," with the propensity to become fat at an early age, and in the shortest time, are those best fitted for grazing purposes. These remarks apply to neat cattle as well as to sheep. It is evident that the product, whether in beef, mutton, butter, cheese, or milk, must be estimated by the *quantity of food,* before the result can be had. Early maturity not only saves food, but spares capital and gains time. The quantity and quality of the wool is a matter of serious importance, when the value of sheep is to be determined. I do not mean by quality, the fineness of the fibre alone; nor do I mean to confine the remark to sheep whose wool is of the finer sort. The filaments of combing wool should part readily—those of fine wool should be *soft, and elastic,* as if it had been frizzled. The mere fineness of the fibre, or length of the staple, is not the only test of excellence: a diseased, or half starved sheep, produces fine wool, but not an elastic, nor useful material.

The sheep which produces the finest fleeces, are not *necessarily* the best to form a *breeding flock.* If their constitutions be not good—if *their forms* be bad, the secretion of yolk, which is essential for the support of the fleece, must be small; the offspring, consequently, will be a degenerate race. Thus, in selecting merinoes, regard should be given to their forms, even in those parts of the country where the demand for the carcass is so small, as to make mutton of little value. The Saxon sheep, which command, at this time, from two to three hundred dollars a piece, and are so much superior to our best merinoes, as to have led Mr. E. Dupont to import several fine individuals direct from Germany, to improve his well known flock, are but merinoes improved by German vigilance.

John Hare Powel.

CULTURE OF COTTON AS A STAPLE IN VIRGINIA AND MARYLAND.

[It answers a valuable purpose to record such particulars as may in future times compose *the history* of agriculture in the different districts, especially when those items contain *practical* information—hence it was that we solicited for publication the following handbill, which we were informed had been addressed, at the time of its date, by its intelligent and public spirited author at his own expense, to his fellow citizens, for their information and benefit.]

TO THE FARMERS OF ACCOMACK AND NORTHAMPTON.

Well aware how little I am entitled to your attention, either from my age or experience, it is with the utmost diffidence I undertake to address you upon a subject, the importance of which alone emboldens me to the task, and for which I may meet with censure instead of applause.

You will readily acknowledge that the present prices of corn and oats, do not pay the expense of cultivation rent free: and unless some change for the better takes place, ruin must in a short time be the inevitable consequence. Fully impressed with the truth of this fact, allow me, most respectfully, to draw your attention to another branch of agriculture, which I have no doubt, will be attended with very different results. I allude to the cultivation of Cotton.

Within a few years past, this article has engrossed much of the attention of Virginia. In the counties of Sussex and Southampton, until within the last four years, it was only raised in small lots, similar to what is now practised on the Eastern Shore; but now it is the principal crop in that section of the country. Can it be doubted, but that both your soil and climate are equally, if not more favourable to its cultivation, than that enjoyed by either of the counties above mentioned? The plant delights in a light,* sandy soil, not liable to be overflowed by heavy rains, which is precisely the nature of your lands—nor are you so subject to early frosts. Cotton was also cultivated as a crop last year, in Dinwiddie county, and the result far surpassed the most sanguine expectations.

It would be altogether unnecessary for me to enter into a regular discussion of the subject, were I even equal to the task—for although the article of Cotton has not engaged your attention as a staple production, you are not entirely unacquainted with its properties. But having lately visited Petersburg and the adjacent country, where, as before remarked, it has excited much of the public interest; and having spared no pains to gather all the information upon the subject in my power, it may not be amiss to lay before you a few facts as a guide to assist you in making up your opinion. The result, therefore, of these my investigations, is most respectfully submitted to your consideration.

Cotton, like every thing else, grows best in rich land; but, nevertheless, profitable crops may be made where Corn would fail. The lands of Sussex and Southampton, generally, are poor, yet many fields last year gave handsome returns in Cotton, which would not yield two barrels of Corn per acre. From the best information I could obtain, you may consider the following as a fair estimate. Land that will produce two barrels of Corn per acre, will yield 400 lbs. Seed Cotton—three barrels to the acre, which they consider good land, may be safely relied on for 800 lbs.—four barrels to the acre, 1000 lbs.—five barrels to the acre, 1200lbs.; and land of a superior quality, has yielded 2000 lbs. Many persons gave me higher rates than the above, but these may be considered as a minimum—and not mere theory, but the result of actual experience. An intelligent farmer from Sussex, informed me that he raised last year 17,360 lbs. good Seed Cotton on a ten acre lot.

The first of May is the proper season for planting. The method adopted in those counties, is to drill in distances proportioned to the quality of the land. For poor land, say two barrels to the acre, the rows should be three feet apart, and the plants four inches in the drill. If three barrels to the acre, the rows may be three feet six inches, but let the stocks stand six inches in the drill. If the land will bring four barrels to the acre, drill your land four feet, and set the plants eight inches apart—and for prime land, have the distance five feet, and in the drills twelve or fourteen inches.

Cotton does not require more cultivation than Corn, nor is it so liable to suffer from drought. It is true the gathering of the crop is more tedious; but on the other hand, it may remain in the field until the end of the year without injury, and thus give you sufficient time with your ordinary force to save it. Much of the last year's crop remained ungathered while I was in that neighbourhood, about the first of February. In addition to this, Cotton is an improving crop, and the same land may be successfully devoted to its culture for years in succession—while it is well known that this course pursued with Corn will effectually ruin the soil.

Cotton now commands seventeen cents per lb.; but this is much above its average value, and is owing to causes which may not exist again. I think, however, you may safely calculate on ten cents per lb. which is about equal to two dollars per hundred weight in the seed, after deducting the expense of picking, baling, &c. Taking, therefore, this price along with the estimates above made for your guide, you will readily see the decided advantage which Cotton has over any other crop you can raise. I am persuaded that it is the only course to be pursued in order to retrieve the inhabitants of the Eastern Shore from the embarrassment which the reduced prices of produce has created, and I most earnestly advise you to make the experiment.

Let us suppose that the next year's crop of Corn will command three dollars per barrel, (and this is double what you have any reason to expect,) and that your land will yield three barrels to the acre, which is nine dollars per acre—the same land, according to the above estimate will insure sixteen dollars per acre.

The importance of the subject must plead my apology for intruding these remarks upon your notice: If they should be the means of inducing you to abandon a course which has been so long unprofitably pursued, and strike out into a new path, opening far brighter prospects to the view; I have no doubt the result will equal your most sanguine expectations, and I shall enjoy the proud satisfaction of having been useful to my fellow citizens by promoting the measure.

I am, most respectfully, yours, &c.
FRANCIS H. SMITH.

Eastville, February, 1825.

HORSE MILLS.

Dear Sir, *Eastville, Va. 4th Dec.* 1825.

In a late number of the American Farmer, I noticed inquiries concerning horse mills. Perhaps the inclosed paragraph, giving an account of "Bailey's Iron Horse Mill," will be a sufficient answer. If it will perform but the half of what the inventor professes, it must certainly prove a valuable acquisition to the planters of the south—particularly those who have already cotton gins erected, as this mill could then be applied with but little expense. If Mr. Bailey would furnish an engraving of his machine for your paper, and also state the price, exclusive of the machinery, it would no doubt be gratifying to your subscribers, as well as serviceable to himself. Respectfully, &c.

F. H. SMITH.

BAILEY'S IRON HORSE MILL.

Hartford, Conn. Oct. 25.

Among the many valuable inventions which our inventive countrymen are constantly producing, Bailey's Patent Cast Iron Gristmill claims a conspicuous rank. We had intended, some time since, to have spoken of this mill, and should be doing injustice to our own feelings, as well as to the worthy and ingenious mechanic who invented it, were we longer to delay the expression of our thorough conviction of its utility and usefulness. Nor, in thus expressing ourselves, are we alone. Our opinion of its merits is in accordance with that of many gentlemen who have seen it, and witnessed its operation. It is, indeed, an invaluable invention. To the farmers and planters of the south, particularly, it must be a great desideratum—to the farmers, distillers, &c. at the north and west, it will be valuable, and the public generally will be benefited by its introduction.

Our attention has been called to this subject, at this time, by an article in the National Intelligencer, of the 15th instant, requesting information as to the power, performance, and cost of these machines, and the address of the person who constructs them. Mr. Bailey, the inventor and patentee, is a resident of this city. We pointed him to the paragraph in the Intelligencer, and, in answer to the queries therein contained, he has authorized us to say: That his mills have been tested by grinding wheat, rye, and corn, as well as most kinds of provender, corn in the ear, oil cake, &c. and its work pronounced, by experienced millers, to be equal to that produced by the common millstones; one horse will grind ten bushels of wheat or rye per hour, sufficiently fine for flour; the cost of the mill, with the machinery for a horse to work it, will be from 250 to $300.

The inventor is now busily engaged upon his mills, and will soon be able to furnish them to order. Letters upon the subject, addressed to Henry Bailey, Hartford, Conn. will be duly attended to.

[*Mercury.*

INTERNAL IMPROVEMENT.

MARYLAND CONVENTION.

In our last we gave a brief account of the organization of the Convention which assembled in this city from ten counties and two cities of the state, to deliberate on the subject of the internal improvement of the state—and we there gave the names of the gentlemen of the committee, to whom the various propositions submitted by several members, as well as the whole subject, was referred by the Convention. It could not be expected that in this (weekly) journal, we should give the proceedings *in detail,* which have since been had: indeed, we must ask our readers, spread as they are over the face of the whole Union, to consider the circumstance of this state being the one of our nativity and residence, as the excuse we would offer for occupying so much of the American Farmer, with a topick peculiarly interesting to Maryland in one sense, but in another of vital concern to the whole Union.

In this number we content ourselves with giving the Report of the Committee on Internal Improvements, with the amendments adopted in the progress of the Convention's deliberations. Very important views were presented by different members, which, though not sanctioned by the Convention, have or will appear in the daily papers, and will tend to enlighten the publick mind, and afford matter for history, whilst some of them may be revived for future consideration. On the whole, we apprehend the result is not auspicious to any practical legislative result at the next session of the legislature. It was obvious, that the members from the Potomac counties, met here with the most conciliating feelings towards the city of Baltimore, and with a general conviction of the immediate and inseperable connexion between the welfare of this city and the counties they represented. On the other hand, it cannot be doubted, that on the part of Baltimore, the sentiment is rapidly spreading, that her prosperity is to be greatly promoted, if it do not indeed depend, on the consummation of her connection with the western waters, and the lake countries, by the means of the Chesapeake and Ohio canal. It was apparent, that the only obstacle which finally prevented an amalgamation of the strength of Baltimore and the Potomac counties, as represented in the Convention, was the consignment of a great national work to the hands of an incorporated company—to be executed by agents not exclusively appointed by, and amenable to the *government* authorities, by whose powers and means, alone, the work can ever be accomplished. Here was the sticking point. The final vote would have been almost unanimous, if the gentlemen from the Potomac would have accepted from Baltimore the following amendment, offered by Mr. Taney in its behalf, to be inserted at the end of the 6th resolution:

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* *Nov.* 1825.—It may not be amiss to state, that several experiments which I have seen made this year, have induced me to change my opinion in this particular. Many intelligent farmers, whose opinions I respect, prefer a soil rather *stiff* than *sandy,* provided it does not *bake* too hard. I have reason to believe, also, that our low *salt* lands are peculiarly adapted to Cotton. I have seen a field, wherein you might see distinctly how far a *spring tide,* in April, had extended, by the unusually green and flourishing appearance of the Cotton. I also saw, last August, very beautiful Cotton growing in what the preceding year was *marsh pasture.* It was planted the 20th June—having been entirely overflowed by the 4th June.

December 10*th,* 1825.

"And provided also, before any investment shall be made by the State, the rights of the Potomac company in the Potomac river, and the streams which empty therein, shall be extinguished by compromise or otherwise, and provision also made by law that the money so to be invested shall be expended for the purposes herein before mentioned by public agents to be selected and appointed, and to be accountable in such manner as may be agreed on by the governments of the United States, Maryland, and Virginia."

But this was rejected; and here, we think, with great deference to their better judgment, these gentlemen showed too much tenaciousness of their project in all its parts. This project we admit to have been framed on enlarged principles; but as they met professedly to *deliberate* on the best measures, and not to carry any preconceived one, by refusing this amendment, have they not lost the general cooperation which is indispensable to success in their general object? Be it remembered that Mr. Taney, speaking in behalf of his colleagues, disclaimed all idea of divesting existing rights but on the payment to the party of the uttermost farthing that equity, and even liberality could demand. On his amendment, the vote stood—

Yeas—Alleghany, Baltimore county, Baltimore city, Harford county—4.

Nays—Frederick, Washington, Anne Arundel, Annapolis, Montgomery, St. Mary's, Prince George's and Charles counties—8.

The Potomac members thought that Baltimore ought to have accepted the Report, especially as it was recommended to them by the adoption of Mr M'Mahon's amendment—"That it be recommended to the Legislature of Maryland to take early steps for the obtention, by compromise, or otherwise, of the deferred interest of the stockholders and creditors of the Potomac Company," but those who represented Baltimore city and county declared, that so long as the power and the rights of the canal company remained unextinguished, it would present an insurmountable barrier to the undertaking, not only destructive of public confidence, but totally inadequate to the execution of so great an improvement. Had the Convention stipulated for the removal of that barrier, and we are ready, said they, to cooperate most heartily with the best friends and the most interested advocates of the Ohio and Chesapeake canal.

Mr. [illegible], of Montgomery, moved to have the Report divided, and the vote of the Convention taken on as many parts or questions, as it was susceptible of being divided into—saying there were many propositions to which he would cheerfully give his assent, but could not vote for the Report *in extenso*. His motion was lost, and he accordingly voted in the negative; his case, in these respects, was probably that of many others.

We did not propose, when we took pen in hand, to write ten lines on the subject, but we have written off, *currente calamo*, such a sketch as we should have given in a familiar letter to a friend, and find some comfort in the reflection that, precious as time is, it may supersede here the necessity of writing such letters as the obligations of friendship might have required us to do.

The vote on the final passage of the Report, as amended, and here published, was as follows:

Yeas—Frederick, Alleghany, Washington, Annapolis, St. Mary's, Prince George's, Charles, Anne Arundel—8.

Nays—Baltimore city, Baltimore county, Montgomery, Harford—4.

Numerically, the report was adopted by yeas 39, nays 20.

REPORT.

The Committee to whom was referred the subject of Internal Improvement, and the consideration of the ways and means in their judgment best calculated to effect this great and common object of the people of Maryland, having considered the great subjects of reference by the Convention, with all the attention and diligence which their time enabled them to give, have concluded to report to the Convention the following Preamble and Resolutions, with their reasons, as the result of their labours, which they respectfully submit to the superior wisdom and consideration of this honourable body.

Whereas the Chesapeake and Ohio Canal, in connection with a lateral Canal from the Patapsco river, to intersect the Chesapeake and Ohio Canal, at the most approved and practicable point, whether considered in relation to the State at large, or in its prosperous influence upon the trade and commerce of the city of Baltimore, is the most prominent and commanding object for the early and liberal patronage of the Legislature of Maryland—therefore

Resolved, That the practicability of a Canal from Baltimore, to intersect and unite with the Chesapeake and Ohio Canal, thence to Pittsburg, and thence to Lake Erie, no longer admits of a doubt in the opinion of this Convention. There was a period when the magnitude of the undertaking appalled even the most sanguine, who not only doubted the practicability of the measure, but more than all, the ability of the country to accomplish so great a work. The canals of England and Holland, and the rest of Europe, were considered as stupendous undertakings, which European science and capital alone were competent to effect; but the delusion has been dissipated, and recent experience has demonstrated that American skill and enterprize are equal to any thing that man can effect. The Erie Canal is a lasting monument of the wisdom, patriotism, and public spirit of the state of New York, and has rendered certain what before was problematical, it has removed the doubts of scepticism itself, and stands a splendid example to the world, of what may be done in the way of internal improvements. This magnificent work, which is a practical lesson to the Union on the subject of canals, combined with the surveys made by the Commissioners of Virginia and Maryland and those lately made by the Engineers of the National Government, of the contemplated Canal route, leave no doubt on the mind of this Convention of the practicability of the work in question.

2d. *Resolved*, That the projected Chesapeake and Ohio Canal, in connection with one from Baltimore, is an object of the first magnitude to this State, in an agricultural, commercial, and political point of view, and therefore ought, if possible, to be effected.

The time has arrived, in the opinion of this Convention, when the State is imperatively called upon to make a prompt and vigorous effort to accomplish that object, which, more than any other measure of internal improvement, will secure to her the advantages of her geographical position in relation to the Western States, and under Providence, perpetuate the foundation of her happiness and prosperity. This Convention has seen, with admiration, the advances made by New York in her works of internal improvement, and acknowledges with pain and mortification, that Maryland must lose the trade of the Western Country, unless she can be connected with it by the Canal in contemplation. Whilst the trade between the Atlantic and the West, was carried on by wagons, she participated largely in it; but the fact cannot be concealed, that the facilities to transportation afforded by the Erie Canal, are calculated to deprive her of it. When it is considered, that the expense of transportation by land, is more than twenty five times greater than by the Canal, it must be obvious to all reflecting minds, that there can be no competition between land and water carriage. The wagon trade must be abandoned. Yet the State, in the opinion of this Convention, has natural advantages, which, if improved, would render her a successful rival with New York for the Western trade. It is 513 miles from New York to Buffaloe, on Lake Erie, and from thence to the point where the Chesapeake and Ohio Canal would enter the Lake, about 200 miles more, making 713 miles. From Baltimore to Lake Erie, on the route contemplated, it is about 510 miles. Now, if it be conceded that the Erie Canal will command the trade of the country on the north of the Canal line, and also some distance on the south of it, it must be admitted that the Chesapeake and Ohio Canal will command the trade of the country to the south of the Canal line, which includes four fifths of the Lake country, the states of Ohio, Indiana and Illinois, part of Pennsylvania, Virginia, and Kentucky, and indeed all the country whose trade is not exclusively confined to New Orleans. Again—the distance from New York to Pittsburg is 700 miles; from Baltimore to Pittsburg it is only 400 miles; making a difference of 300 miles in favour of Baltimore. From these considerations, this Convention indulges a confident hope, that should the transcendant natural advantages of the commercial emporium of the State be improved as they ought to be, she may engage in a successful competition with New York on Lake Erie and at Pittsburg, for the trade of the Western world. Why should she not? It is seen that Baltimore is from 200 to 300 miles nearer to the Western States than her great rival; and if the productions of the West could be transported to her with as much facility, and as good prices obtained there as at New York, and if at the same time Baltimore could supply foreign and domestic goods upon as good terms as New York, it is reasonable to conclude that Baltimore would enjoy a full portion of the Western trade. And should the Northern Canal be closed by ice two months longer in the year, than the Southern, it will give to the latter, independently of all other considerations, a decided preference. That the commerce of this great City is of vital importance to the prosperity of the State, and ought to be fostered and extended as the means of increasing her wealth, power, and population, are propositions which would seem to admit of no diversity of opinion. They may be illustrated and brought home to the understanding of every man, by supposing that Baltimore, by some dreadful calamity, was annihilated. What then would be the condition of the State? It would be reduced to poverty, insignificance, and ruin. On the other hand, if Baltimore, by maintaining her natural advantages, could become another London, what blessings might not be expected from it, by affording the best of markets at home, for the productions of the country. Every citizen is interested in the measure, and ought to give it his hearty support.

In a political point of view, the importance of this communication with the Western States, is not less apparent. It will facilitate the intercourse between the Atlantic and Western States, connect the people by interest, habit, and constant communica tion, and unite them by an indissoluble bond. To this subject the parting words of the Father of his country apply with peculiar emphasis: "The East, in an unrestrained intercourse with the West, already finds, and in the progressive improvement of interior communication by land and water, will, more and more, find a valuable vent for the commodities which it brings from abroad, or manufactures at home. The West derives from the East, supplies requisite for its growth and comfort; and what is, perhaps, of still greater consequence, it must of necessity owe the secure enjoyment of indispensable outlets for its productions, to the weight, influence, and future maritime strength of the Atlantic side of the union, directed by an indissoluble community of interests as one nation." It is to be hoped, that the National Government will not be indifferent to measures, which so powerfully and intimately affect the national interest; and that the Representatives of ten millions of freemen, will make an effort to consolidate and perpetuate that union on which their prosperity, happiness, and freedom pre-eminently depend. The work is worthy, and claims the patronage of the Nation, and if effected, will remain an imperishable monument of its honour and patriotism, to all future times. From these united considerations, this Convention is convinced that the Canals, if made, would be a blessing to the State and the Nation.

3rd. *Resolved,* That in the opinion of this Convention, the interest and prosperity of the State are essentially involved in the prosecution of this great work, and that she ought to use her best exertions to procure its accomplishment, provided that it will not be expedient to apply the resources of the State to that object, unless an adequate fund shall be raised to complete the Chesapeake and Ohio Canal to the base of the Alleghany mountains.

This Convention has no correct data upon which to predicate estimates of the expense of making the Canal from Baltimore to Pittsburg, or from Baltimore to the Alleghany; but, taking the expense at ten millions of dollars to Pittsburg, and five millions to the Alleghany, no reason is seen why it should not yield an interest equal to the Erie Canal; which, at this time, is understood to give five per cent. on the sum invested, and the calculations are, that it will shortly produce upwards of a million annually to the state. The agricultural productions of the country, and those of the forest, through which the Chesapeake and Ohio Canal will run until it reaches the Alleghany, are at least equal to those of New York, in addition to which, we may count on coal, which abounds to an extent not surpassed in any other country. It is calculated that the tolls on that article alone would immediately pay the interest on several millions of dollars.

If the city of New York consumes annually two millions four hundred thousand bushels of coal, what will not the country between Cumberland and Baltimore, including the District of Columbia, the city of Baltimore, and the manufacturing establishments in her vicinity require, when it can be furnished at a sum not exceeding sixteen cents a bushel. The advantages of coal to the community at large, and to the cities, towns, and manufactories in particular, are incalculable. What would England have been without her coal, and deprived of it what would she become?

A Canal through the western counties of the state, would relieve the people from the most distressing and onerous burdens. The freight of a barrel of flour from Hagerstown to Baltimore, is never less than one dollar, and generally one dollar and twenty-five cents. A canal navigation would reduce it to five cents, exclusive of tolls, and on all other articles in the same ratio.

The Convention feels a deep conviction, that a Canal from Pittsburg to Baltimore, would render her in preference to any other eastern port, the emporium of western commerce; but as that object is beyond the ability of the State to accomplish, without the aid of the National Government, it is nevertheless of opinion, that a Canal may, and ought to be made, to the foot of the Alleghany, which would bring into the bosom of the State the rich productions of the country bordering on the Potomac and its branches, and render our Commercial Capital a still more flourishing and prosperous city.

4th. *Resolved,* That in the opinion of the Convention, the application of the public funds to this project, will be found a profitable and beneficial investment, that its accomplishment will encourage agriculture, promote commerce and manufactures, increase population, augment the public wealth, enlarge the ability of the State to foster other works of public utility, and strengthen the Union.

5th. *Resolved,* That all minor objects ought to yield to this undertaking, which the united energies of the State alone can effect.

6th. *Resolved,* That in the opinion of this Convention, the State ought to invest $500,000 in the Chesapeake and Ohio Canal—Provided, that before the State shall make such an investment, the sum that may be necessary with such investment, according to the estimate that may be reported by the United States' Engineers, to complete it to the eastern base of the Alleghany mountains, shall be first subscribed; and further, that the State appropriate $500,000 for the completion of a Canal from the Patapsco river, to intersect the former; and that the investment in the one, and the appropriation for the other, be simultaneous.

And provided further, That the Legislature, before authorising any subscription on the part of the State to the Chesapeake and Ohio Canal, be satisfied in such manner as is prescribed by the act of Congress, that a Canal connecting the Patapsco with the Chesapeake and Ohio Canal at such point in the District of Columbia, or through the same, as the Legislature shall judge expedient, may be cut without impeding or injuring the navigation of the Chesapeake and Ohio Canal.

7th. *Resolved,* That it be recommended to the Legislature of Maryland, to take early steps for the obtention, by compromise, or otherwise, of the deferred interest of the Stockholders and Creditors of the Potomac Company.

8th. *Resolved,* That it is the sense of this Convention, that the proper time has arrived, when a liberal and general system for the internal improvement of Maryland, at her expense, ought to be adopted by the Legislature of the State, and that the first object in interest and importance to her citizens, is the construction of a Canal from the waters of the Patapsco, near Baltimore, to some point on the Potomac river, which shall most conveniently unite with the Chesapeake and Ohio Canal.

9th. *Resolved,* That it is the sense of this Convention, that the Legislature of Maryland ought, without delay, to propose to the Legislature of Pennsylvania to unite with that State in constructing an ascending navigation from the tide water of the Chesapeake Bay, at Port Deposit, to the town of Harrisburg, in Dauphin county, by Canals or otherwise, as an object of great interest and importance to Maryland.

10th. *Resolved,* As the sense of this Convention, that it would be proper for the Legislature of Maryland, at its next session, to constitute, by law, a Board of Public Works, whose duty it shall be to cause an actual survey and examination of the State to be made, and to ascertain what rivers can be improved by removing impediments to their navigation, and the expense of such improvement; what Canals and Rail Roads are practicable, and which, if made, will promote the public interest; with the expense of constructing such Canals and Rail Roads, and generally, to develope the extent of the agricultural, manufacturing and commercial resources of the State, with digested plans for rendering those resources subservient to the general welfare.

11th. *Resolved,* As the opinion of this Convention, that the resources of the State are abundantly sufficient to meet any expenditure which the accomplishment of the works recommended by this Convention may require, without imposing onerous burdens on her people, and that the ways and means may be readily devised by the wisdom of the Legislature, to pay the interest on any loans that may be authorised for that purpose.

12th. *Resolved,* That a committee of three be appointed by the Chair, to draft and present a memorial, on behalf of this Convention, to the Legislature of Maryland, in conformity with the aforegoing resolutions.

Mr. Sprigg submitted the following resolutions, which were unanimously adopted:

Resolved unanimously, That the thanks of this Convention are hereby most respectfully tendered to John Montgomery, Esq., Mayor of the city of Baltimore, for his personal attentions to the comfort and convenience of this Convention.

Resolved unanimously, That the thanks of this Convention are hereby returned to the Editors of the Baltimore American for their politeness in furnishing the members of the Convention with their newspapers during the session.

Mr. Potts submitted the following resolution, which was unanimously adopted:

Resolved unanimously, That the thanks of this Convention are hereby tendered to the secretary, and the clerk, for their services during the session of this Convention.

Mr. Price submitted the following resolution, which was unanimously adopted:

Resolved unanimously, That the thanks of this Convention are due to Charles Carroll, of Carrollton, Esq., for the able and dignified manner in which he has presided over its deliberations.

The Convention then adjourned *sine die.*

The venerable Charles Carroll, of Carrollton, President of the late Convention on Internal Improvement, has instructed J. S. Skinner, Secretary of said Convention, to notify J. C. Herbert, Daniel Murray, and R. T. Spence, Esqrs., of his having, in pursuance of authority given by the last resolution, designated them as the committee to prepare a memorial to the Legislature of Maryland, in conformity with the Report and Resolutions adopted by said Convention.

LADIES' DEPARTMENT.

LAVENDER.—LAVANDULA.

LABIATÆ.—DIDYNAMIA GYMNOSPERMIA.

So named from its use in fomentations and baths.—*French,* la lavande: in Provence, aspic; espic, whence the foreign oil of lavender is usually called oil of spike.

The common Lavender is increased by cuttings, which should be planted in March, and placed in the shade until they have taken root, they may then be exposed to the sun. These plants will live much longer, and endure the most severe cold, if planted in a dry, gravelly soil. They grow faster in summer if the soil be rich and moist; but then they are generally destroyed in the winter, nor are they so strongly scented as those which grow in a barren soil.

Lavender was formerly used for edgings, as we now use box, thrift, &c.; but it grows too high for this purpose, and the practice is generally discontinued. The agreeable scent of Lavender is well known, since it is an old and still a common custom to scatter the flowers over linen, as some do rose-leaves, for the sake of this sweet odour:

"Pure Lavender, to lay in bridal gown."

Lavender-water, too, as it is usually called, although it is really spirit of wine scented with the oil of Lavender, is one of our most common perfumes. This plant has been much celebrated for its virtues in nervous disorders, and is an ingredient in some of the English-herb teas now in such general use. This species of Lavender is common to Europe, Asia, and Africa. It flowers from July to September. French Lavender (also called Purple Stoechas, from being found in the islands named the Stoechades) may be sown in March; several seeds together in a light, dry soil. When the plants are two inches high, they may be separated, and planted into pots seven inches wide: they must be placed in the shade till they have taken root, and be gently watered every second day. If the winter prove severe, they should be housed; but in a dry soil they will bear our common winters very well. This species may also be raised from cuttings, like the common Lavender It is a native of the South of Europe, and is in bloom from May to July.

The other kinds of Lavender may be increased either by cuttings or seeds; but they do not all ripen seeds in this country. They require winter shelter; and the Thick-leaved species, which is a native of the East Indies, must be preserved in a hot house They should have but just water enough to prevent drought; especially in the winter.

The stalks of Lavender, even when the flowers have been stripped away, has an agreeable scent; and if burnt, will diffuse it powerfully and pleasantly: they form an agreeable substitute for pastiles, and will burn very well in the little vessels made for that purpose. To a Londoner it becomes a kind of rural pleasure to hear the cry of—"Three bunches a penny, sweet Lavender."

"And Lavender, whose spikes of azure bloom
Shall be erewhile in arid bundles bound,
To lurk amidst her labours of the loom,
And crown her kerchiefs clean with mickle rare perfume."
Shenstone's School-Mistress.

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 23, 1825.

THOMAS PHENIX, Esq., Assistant Secretary to the late Convention on Internal Improvement, proposes to publish forthwith, on his own account, the *Journal, complete, of said Convention,*—containing all the propositions submitted by the different members, either in open Convention or in Committee; as well those which were not, as those which were adopted. In the proportion that the Internal Improvement of Maryland shall continue to be an object of publick attention or of legislative proceedings, this journal must be of almost indispensable utility: to it, constant reference must be had by those who wish to discuss or to understand the subject. For the execution of the work, Mr. Phenix is as well qualified by personal fitness and capacity as by his particular relation to the Convention

Subscriptions will be received by the Editor of the American Farmer—the price will be 50 cents.

AMERICAN STUD BOOK.

(The particular attention of our readers is invited to the following The utility and value of such a work are too obvious to need any illustration.)

This work has engaged much attention for several years—considerable matter has been collected, and it is now advancing to maturity. That it may be as full and perfect as possible, all persons who have any fondness for horses, and are disposed to contribute to the useful, who have been, or are now engaged in breeding the blooded horse, are earnestly solicited to forward, as soon as possible, by the form below, an account of their stock of horses, at present or at any former time owned; and they who feel any interest in its speedy completion, are importuned to stimulate their less zealous friends. It is to be hoped that no delay will attend a compliance with this request, as it is too true to be doubted, that a publication like this will greatly enhance the value of any man's stock of horses.

It is expected that all communications will be made as soon as practicable, and none delayed, which are intended, beyond the 1st of July, 1826, a space, it is believed, more than sufficient for all communications; as it is intended by that time to commence the arrangement, and as soon after as possible to put the work to press, not doubting that the subscription will be sufficiently full to justify the publication.

Communications will be addressed to the Secretary of the New Market Jockey Club, Petersburg, Va.

The form for a brood mare and her progeny:

(*Her name, if any.*)

A ——, *folded in* ——, *bred by* ——, *sold to* ——, (if any,) *was got by* ———, *her dam* (name, if any,) by ———; and continue the pedigree in full.

In the first blank insert colour, as *black, brown, chestnut, sorrel, bay,* or *grey*—in the second blank, the year folded—in the third, by whom bred—4th, to whom sold (if any sale)—5th, sire, and give a full pedigree; with remarks, if she is distinguished in any way. Example:

(CASTIANIRA.)

A brown mare, folded 1776, bred by John Tayloe, Esq., of ——— county, Va., imported 1799, got by Rockingham, he by Highflyer, dam Tabitha, by Trentham—Bosphorus, &c.

1805, b. c. *Sir Archy,* by Diomed.
1807, s. c. *Hephestion,* by Buzzard.
1808, br. f. *Castania,* by Arch Duke.
1809, missed, to ———

Stating the horses to which she may have missed.

For a stallion—Example:

(GREY DIOMED.)

A grey horse, folded 1786, bred by Richard Brooke, Esq., of ———, sold to John Tayloe, who sold him to Major James Blick, of Brunswick county, Va. He was got by Medley, his dam by Sloe, Vampire, &c. with remarks, if he be distinguished particularly in any thing. *If imported, when and by whom.*

The remote or recent records of any Jockey Club now in existence, will be thankfully received on loan, and shall be safely returned. That this valuable collection may be continued hereafter, *it is earnestly recommended,* that all who stand horses should exert themselves to obtain, annually, the pedigrees of all mares sent to them, and after the produce is known, to forward the pedigree and result, directed to the Secretary of New Market, Petersburg.

The publication of a *Calendar of Races past and to come,* is in contemplation. To effect that object, which is thought desirable and important, all Secretaries of Jockey Clubs are requested to forward annually, by the 31st December, a transcript of all their Races—and each Club will be furnished with a copy, *gratis.*

Editors are requested to give the above a few insertions.

TOBACCO—Inspections the last week, 113 hhds.

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An Oration upon the dignity and utility of the art and science of Agriculture, delivered before the Dorchester Agricultural Society, in Cambridge, Nov. 10, 1825, by Joseph E. Muse, M. D., President of the Society—On the Profits of Sheep Husbandry—Grass Seeds to be sown—John Hare Powel on Sheep—Francis H Smith on the Culture of Cotton as a staple in Maryland and Virginia—Bailey's cast iron Horse Mill—Proceedings and Resolutions of the Maryland Convention for Internal Improvement—On the Culture and History of Lavender—American Stud Book—Editorial.

PRICES CURRENT.

ARTICLES.	per	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	33	35		
COFFEE, Java, ...	—	16	19	22	25
Havana, ...	—	15½	17½	18	20
COTTON, Louisiana, &c.	—	16	20		
Georgia Upland, . . .	—	15	16		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33		37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	4 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	1 10	1 12		
FLOUR, Superfine, city,	bbl.	4 75	5 00	6 00	6 50
Extra . . . . do.	—	5 12½	5 25		
Fine, ...	—	4 75			
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	54	55		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	80	90		
do. Red, ...	—	80	85		
Rye, ...	—	54	55		
Barley, ...	—	95	1 00		
Clover Seed, Red . .	—	4 75		5 25	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	bush.	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36		
Peas, Black Eyed, . .	—	1 00		1 50	
Beans, White, ...	—	1 50		1 62	
HEMP, Russia, clean, .	ton	200			
Do. Country	—	120	130		
HOPS, ...	lb.	27	29		
HOGS' LARD, ...	—	9½	10	12	
LEATHER, Soal, best,	—	26	27		
MOLASSES, sugar-house	gal.	45			
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	1 87½			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	32	35		
Linseed, ...	—	90	95		
PORK, Baltimore Mess,	bbl	13 00	13 50		
do. Prime, . . .	—	10 50		12 00	
PLASTER, cargo price,	ton.	5 37½			
RICE, fresh, ...	lb.	3½	3½	6	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	5½	7½	10	12
WHISKEY, 1st proof, .	gal.	26	27½	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37½	50	
SUGARS, Havana White,	c.lb.	13 50		15 00	16 00
do. Brown, . .	—	11 00			
Louisiana, ...	—	10 00	11 00	11 50	12 50
Loaf, ...	lb.	19	22	20	24
Lump, ...	—	16	18	23	
SPICES, Cloves, ...	—	75	78	1 00	
Ginger, Ground, . . .	—	7		10	
Pepper, ...	—	18		25	
SALT, St. Ubes, ...	bush	43			
Liverpool Ground . .	—	50	52	62	
SHOT, Balt. all sizes, .	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 50		
Lisbon, ...	—	1 15	1 20	1 62	1 75
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOY, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

JUDGE BUEL'S SUCCESSFUL SYSTEM OF FARMING ON LIGHT LAND,

Near Albany, in the State of New York.

From our notes upon Judge Buel's system of farming, made upon the spot, aided by the more ample observations of a gentleman curious in agricultural research, who spent the last summer months in the northern states, we are enabled to present the following sketch; and believe that it will repay every reader who knows how to estimate the value of industry, working by the light of science.

This gentleman, eight years ago, purchased about eighty acres of light, sandy, unimproved land, with a view of indulging a strong propensity for agricultural and horticultural pursuits; and in 1820 he relinquished a lucrative office, removed with his family to his plantation, which in Virginia and Maryland would hardly be sufficient for a tobacco field, and has since continued to superintend its improvement.

Mr. Buel's farm lies about two miles west from the state-house in Albany, in what was until recently the commons of that city. The soil, which is denominated sandy alluvion, was covered with a meagre growth, principally of white and yellow pine, and small or shrub oaks, and rests upon a stratum of clay, found at various depths, from two to ten feet. Blue clay, or clay marl, has been met with at seven and ten feet below the surface, which gives, on analysis, from 20 to 30 per cent. of lime. Mr. B. considers this the most beneficial application which can be made to the surface soil; lime and clay, which constitute the marl, forming, with the sand, the most desirable mixture, both as regards fertility and adaptation to various crops. These commons, like most of the pine lands in New York, have until within a few years, been deemed too barren for cultivation. But modern improvements in husbandry have tended very much to enhance their value. With the aid of gypsum and clover, and a judicious rotation, their average product is found to be at least equal to that of heavier soils; while the expeose of tilling them is ordinarily fifty per cent. less. Indeed, so sanguine is Mr. Buel of their superiority for convertible husbandry, that he declared to me he would not exchange, acre for acre, for the deep, rich alluvial flats of the Hudson.

The short time that Mr. Buel has been upon his farm, has been devoted principally to clearing, draining and enclosing his grounds, planting fruit trees, erecting buildings, and, to use his expresson, *preparing for improvement*. But as he has in most cases varied from the common practice of our farmers, and has withal been pretty successful in his innovations upon old habits, it has been thought that some sketches of his management, might be interesting to our readers; particularly to such as have courage to deviate from the beaten track of their fathers. But before we proceed to the detail, we must premise, that having been educated a mechanic, Mr. Buel commenced his new business without any of the prejudices inseparable from habit, and with a consciousness that *he had every thing to learn.* He sought for information at its best sources—in the practice of the most eminent farmers at home and abroad, and in the sciences upon which all good husbandry is based. He acquired his knowledge by frequent tours of observation, by free access to the library of the board of agriculture, of New York, of which he was secretary, and from the periodical agricultural publications of the day, of which he is a liberal patron. Having fixed upon a system which he considered adapted to his soil and his market, he subjected it to the test of careful experiment, and personally superintended and directed the labour. He carefully combined practice with science, and thereby escaped or corrected many of the errors which too commonly arise, from the visions of the theorist on the one hand, and the obstinacy of habit on the other.

Having disposed of these preliminary matters, we proceed to detail, under distinct heads, some particulars of Mr. Buel's practice in farming, and some of the reasons upon which we understand his practice is founded.

Rotation of Crops.

The general course is one of five years, embracing six crops, viz. First year, corn and potatoes, as fallow crops, followed by wheat in autumn. Second year, wheat, followed by turnips. Third year, barley and grass seeds. Fourth and fifth years, grass, or grass and pasture. The corn is cut early in September, as soon as it is hard, close to the ground, in time for the wheat. The quality of the cattle food is improved, and the quantity augmented, by cutting and immediately binding and stooking it in a succulent state; experience fully demonstrating that no injury will result either to the corn or stalks. When the Swedish turnip is to be introduced, it is put in with a drill barrow upon a clover lay (the clover being previously mown or fed off) early in July. The second year the ground is sown with barley and grass seeds. When the common turnips are omitted, (as the extent of their culture depends upon the demands of the market,) grass seeds are put in with wheat. The first crop in a course is always a hard crop, and is the only one manured. The manure is generally applied before fermentation has far progressed, and as far as practicable ploughed under before its moisture has been dissipated by the sun and winds. The hoed crops—corn, potatoes, beans and Swedish turnips, are strong hardy feeders, relishing, and thriving upon, the coarsest food. The manure is always spread broadcast, that it may the more certainly be decomposed and better incorporated with the soil. The hoeing process, if carefully performed, extirpates the weeds, and leaves a fine tilth for the small grains which are to follow; and which, being more delicate feeders, derive most benefit from the manure after it has undergone the fermenting process, and parted with its grosser properties to nourish the corn and potato crops. He has made experiments to ascertain the comparative value of long and short manure, and of a clover sod upon hoed crops. These have resulted in a conviction, that long or unfermented manure has a decided preference, not only for the crop to which it is immediately applied, but because it imparts fertility to the soil longer than short manure. In a field of corn, in which one of these experiments was made, the growth was more rapid, in the early part of the season, where the fermented manure had been applied; but in harvesting the crop, the advantage was found to be 15 or 20 per cent. in favour of the other section of the field. Other circumstances being similar, Mr. B. thinks a good clover sod benefits his hoed crops one-fifth or one-fourth; and under this belief he has sown clover the year preceding a corn crop, merely to afford fall feed and an enriching lay. But it must be borne in mind, that he never ploughs but once for a crop; and that after the sod and manure are well turned under, and the interstices closed with the roller or harrow, or both, the furrow slice is not broken by the plough, during the growth of the crop. The cultivation is superficially performed with the harrow, Sinclair's cultivator, and a very light plough, and the plants but slightly earthed. The advantages of this mode of culture are particularly great in a dry season. The decomposing vegetable matter, which is to serve as food for the plants, is placed beyond the wasting influence of the sun and winds, and precisely where the innumerable roots of plants, particularly of corn, search for nourishment. The number of mouths in a plant of maize is incredible. Ten or a dozen large roots are found to extend the length of the stock, in different directions, and these are completely bristled in their whole length with small fibrous roots, like a bottle brush. They all contribute to convey food to the stock and grain. Is it not reasonable to believe, that the destruction of these roots, or a part of them, by deep ploughing and hoeing, materially injures the plant? The decomposition of the sod and manure require heat and moisture: these are generally abundant six inches below the surface; but moisture seldom continues long upon the surface during the summer months. The utility of placing the food of plants *under* the surface of the soil, and of *keeping it there*, by ploughing shallow for the wheat which is to follow the corn, was strongly, and Mr. Buel thinks correctly, insisted upon by the late John Lorain, of Pennsylvania.

On asking Mr. Buel for an estimate of the expense and products of an acre under his course of cropping, he handed us the one subjoined, which he had drawn up two or three years ago for the New England Farmer, and which he thought tolerably correct. On observing that the corn crop appeared to be graduated high, he replied that he thought it no more than a fair medium, if measured when housed in autumn; that in two instances, under common treatment, he had taken 118 and 123 bushels from an acre; in the first case, the whole product being weighed in the ear, and a portion then shelled; that the shrinkage, however, in seven months, amounted to twenty per cent. And he admitted that his crop of the present year fell materially short, on account of the extreme drought, and from the circumstance, that to favour a young orchard, he had deviated from his usual practice of planting on a clover lay.

FIVE YEARS' COURSE—EXPENSE.

First Year.

24 loads of manure, at 75 cts.	$18.00	
1 bush. plaster, sowed before ploughing,	50	
1 ploughing, $1, harrowing, 25 cts.	1.25	
Furrowing or listing, 25 cts. seed, 12½	37	
2 days planting, and 2 weeding, at 50 cents	2.00	
2 do. earthing or hilling	1.00	
Man, boy and horse, to harrow first, and plough at second dressing	88	
1½ days cutting and binding corn	75	
2 men and team one day casting off and stooking	1.50	
4 days husking and cribbing corn	2.00	
Housing stalks, &c.	50	
Threshing sound corn for market	75	
Expense of Corn crop.	——	29.50
Boy and team half a day harrowing stock ground	50	
Ploughing do.	1.00	
Sowing wheat, and harrowing in	62	
6 pecks seed	1.50	

Second Year.

2 days cutting and binding wheat	1.00	
2 men half a day with team, housing crop	75	
Threshing 25 bushels, at 6 cents	1.56	
Expense of Wheat crop.	——	6.93
Ploughing and harrowing stubble	1.25	
1 pound turnip seed, 62½, sowing, 12½	75	
Harrowing in seed	25	
10 loads manure and spreading*	7.50	
4 days weeding and thinning crop	2.00	
6 do. pulling and topping do.	3.00	
Expense of Turnip crop.	——	14.75

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* Seldom applied.

Third Year

1 ploughing $1, 6 pecks barley 75 cts.	1.75	
10 lbs. clover seed, $1; orchard or timothy, $1 50	2.50	
Sowing and harrowing in seeds	75	
Harvesting and housing barley	1.75	
Threshing thirty bushels	1.88	
Expense of Barley crop.		8.63

Fourth Year.

2 days cutting grass	1.00	
4 do. curing and carting in	2.25	
1 bushel gypsum and sowing	50	
Expense of Grass crop.		3.75
		$63.56

Fifth Year.

Expense the same as Fourth year	3.75
Five years' rent, at $5 per annum	25.00
Total expense in five years,	$92.31

PRODUCE.

80 bushels corn, at 50 cents	$40.00	
4 loads stalks, at $2.50	10.00	
		50.00
25 bushels wheat, at $1.	25.00	
2 loads straw	6.00	
		31.00
200 bushels turnips, at 18¾ cents	37.50	
Tops, for cattle	1.00	
		38.50
30 bushels Barley, at 50 cents	15.00	
Straw	4.00	
		19.00
3 tons Hay 1st year, 2 do 2d do. a $10	50.00	
After March, for pasture is worth	6.00	
		56.00
Total value of produce in five years,		$194 50
Deduct expenses as above		92.31
And it leaves a gross profit of		$102.19

or $20.24 per annum.

SIX YEARS' COURSE.

First Year.	Corn, as above		29.50
2nd. do.	Wheat, do.	6.93	
	10 lbs. Clover seed,	1 00	7.93
			37.43
3rd. do.	Grass, do.	3 75	
	10 loads manure, and spreading	7.50	
	Ploughing, and 2 harrowings	1.50	
	1 lb Ruta Baga seed	62½	
	Drilling in do.	37½	
	2 dressings with cultivator	62½	
	4 days weeding and thinning	2.00	
	6 do pulling, topping and pitting	3.00	
			19.37½
4th. do.	Barley and Grass seeds, as before		8 63
5th & 6th years.	Grass, as in preceding course		7.50
			72.93½
	Add 6 years' rent		30 00
	Total charges in 6 years		$102 93½

PRODUCE.

1st. Year.	Corn, as above		$50 00
2nd do.	Wheat, do.		31.00
3rd. do.	Grass, do.	30.00	84 00
	400 bushels Ruta Baga, at 12 cts.	50 00	
	4 tons tops	4.00	
4th. do.	Barley, as before		19 00
5th & 6th do.	Grass, do.		50.00
	Value of produce		234.00
	Deduct charges		102.93
	Total profit in six years		$131.07

or $21.24 per annum.

Since the preceding table was made out, Mr Buel has adopted an improvement in harvesting corn. With a turnip hook, the stalks of a hill are cut off with a blow. They are immediately set up in stacks of about thirty hills, and bound strongly with two bands. After drying a few days, to reduce their weight, these stacks are pulled over, or lifted on to an ox sled, entire, drawn to the place where they are to stand, and set up. This saves the labour of binding in sheaves, and lessens much the trouble of taking them from the field. The expense of harvesting is in this way reduced more than fifty per cent.

2. *Manures and their application.*

These consist of yard and stable dung, town manure, compost and gypsum. The cattle yards are made concave, with borders and sheds to feed the stock and protect them from storms. The subsoil is so retentive, or soon becomes so puddled, as to prevent the waste of urine and other liquids, which collect in the centre, and are there absorbed by the straw, stalks, and other litter, which is fed in the yards, or collected from the fields. By this economy, that moiety of the manure which runs off from a convex yard, is saved, and by the ample saturation and thickness of the mass, fermentation is retarded until the manure is wanted for the fields. Town manure costs from 12½ to 25 cents the two horse load. The yards are generally cleaned in the spring for corn and potatoes, and at midsummer for the turnip crops. It is uniformly spread over the whole surface, and ploughed under as soon as possible. Composts are made in the mode recommended by Lord Meadowbanks, for compost middens, by mixing one part of stable manure with three or four parts of swamp muck, or peat earth, in alternate layers. The manure causes a slight fermentation in the muck, which is a mass of inert vegetable matter; on the appearance of which, the heap is turned and mixed with a shovel, and is soon after fit for use. Directions for preparing this compost, and estimates of its economy in husbandry, may be found in several of the European books on farming. This compost is applied as a top dressing to lucern, fruit trees, grape-vines, shrubbery, flower beds, &c. Gypsum is sown on grass grounds *early* in the spring, and upon corn and potato grounds before ploughing, at the rate of a bushel per acre. This method of ploughing it for summer crops, was adopted on the recommendation of Arator and Judge Peters. Mr. Buel thinks it equally beneficial as when placed upon the hills. Lime has been used by him only on reclaimed swamps, where it has been found beneficial in decomposing vegetable fibre, and in inducing a fermentation in peaty soil.

3 *Orchard and Garden Fruits.*

As these are calculated upon as a principal source of profit, much attention has been given by the proprietor to the selection and cultivation of them. More than a thousand trees have been already put out, most of which begin to show fruit. Among these are one hundred pears, and as many plums. There are also peaches, cherries, quinces, and many varieties of the grape, indigenous and exotic. This is but a *beginning*. A large nursery has been formed, in which the choicest kinds of American and European fruit has been propagated. We have, and shall soon publish a catalogue of apples, compiled by Mr Buel, with a view to guide him in his selection. The table is too large for our columns this week; we will therefore now only state, that it exhibits, in different columns, and on a single sheet of paper, the names and synonymes of more than seventy select apples; the date of the variety and specific gravity of the must, where these have been ascertained; the country or locality where each originated, or was first brought into notice, the particular use for which each is adapted; its size, shape, colour, consistence and flavour; the time at which each variety is fit for use, and the period to which it lasts; the quality of the tree as a bearer; the general character of the tree and fruit; and the authority on which the description is given. We find in this table natives of Great Britain, France, Germany, the Russian empire, and of all the northern and middle states. It embraces many kinds described by Coxe; such approved varieties, described by Loudon in his Encyclopædia of Gardening, as have been introduced into our nurseries, including most of the new varieties of Knight, and others, imported by Mr. Buel from London; and some valuable indigenous kinds not before described. The value of such a descriptive table to the common purchaser of fruit trees, must be apparent; and we hope our nurserymen will profit of the example. Since the completion of this table, Mr Buel has received sixteen new varieties of the apple, selected from the garden of the London Horticultural Society, of which he is a corresponding member, and about thirty other varieties of choice fruit. He contemplates adding to his catalogue a correct drawing of each kind of fruit in its mature state.

Mr Buel, considering that a *tree* is as much benefited by food and tillage as a hill of *corn*, is particularly careful with his young orchards. Of four hundred apple trees planted out last spring, from his nursery, all grew but three; and when last seen by our correspondent, in October, they looked remarkably well, and some of them had made from twenty to twenty-nine inches of new wood. The holes for these trees were dug the preceding autumn, three feet square, and eighteen inches deep, the lower spit spread abroad, and the holes two thirds filled with scrapings of lanes about his barns, or rich surface mould. The expense of making the holes was two dollars per hundred. We understand that he has dressed them liberally this fall with compost middens. Where the ground of his orchard is not tilled, he causes it to be dug with a spade, twice in a summer, two or three feet around each tree, and generally places around the trunks, in autumn, a few shovels of manure, or compost, the first being spread in the spring. He transplants the apple while small, generally after it has grown two years from the bud. The roots are thereby preserved almost entire, and the growth is very little retarded by the removal, provided it is put into as good ground as it is taken from. The heads of the trees are formed in the nursery the summer before they are transplanted, that the wounds of the knife may heal while the growth is vigorous, and the necessity of pruning when they are put in the orchard prevented. The dessert fruit is put in rows, each kind by itself. The cider fruit is the crab, of Virginia; the Harrison and Winesap, of New-Jersey, and the Hagloe, of England. Each kind is planted by itself, to facilitate the gathering and manufacture of the fruit separately; a course which, if generally adopted, cannot fail materially to improve the common table drink of the northern and middle states.

In 1821, the first plantation of apples, which was put out without care or experience, and which had been much neglected before he removed to his farm, was found to be seriously injured by lice, of the shape of flaxseed, but of smaller size, which adhered to the bark, and almost covered the surface of many of the trees. In June, of that year, he applied, by way of experiment, a strong mixture of soft soap, lime and water, of the consistence of whitewash, with a stiff brush, to several of the trunks. He found this had the desired effect. It not only destroyed the insects with which it came in contact, but greatly improved the texture and appearance of the bark, and the growth of the tree. In June, of the present year, a like application was made to nearly two hundred trees, similarly affected, not only to the trunks, but to the branches, as far as was practicable, the tops being previously divested of a great portion of their stunted, lousy wood. The remedy has been complete. The bark has assumed a smooth, healthy appearance; the growth has been luxuriant, and the fruit uncommonly fair and free from worms. The application should be made between the middle of May and middle of June, as that is the time in which the new generation comes forth, and is most readily destroyed. Mr. Buel intends hereafter to add salt to the wash, which will cause it to adhere more firmly, and may withal prove destructive to the insects which puncture and destroy the embryo or young fruit. On examining his peach trees, when in blossom, and when the petals had partially fallen, he discovered great numbers of the *aphis* in the corolla and calix, principally in the latter, feeding upon the embryo. Where these most abounded, there was very little fruit. Most of his plums, in his garden, were punctured by an insect, probably a species of the *curculis*, while small, and fell from the tree; while those in his poultry yard suffered none worth noticing. This seems to corroborate the opinion of the late Dr. Tilton, that poultry and hogs are highly useful in fruit orchards, by destroying the insects which prey upon fruit. It is probable that the salt, soap and lime, if applied early, before the blossoms open, would destroy many eggs and larva, and insure abundance of fruit. Mr. Buel intends to make the trial, and to try another method which has been recommended, viz: to fumigate the trees with brimstone for several mornings, while they are in bloom.

4. *Nursery.*

A small one was put out six years ago, with a view to supply with trees the garden and farm. It has since been extended to a large scale, for the public accommodation, and as a source of profit. It contains one hundred and twenty kinds of apples and a great variety of other fruit. But the owner's intention is to circumscribe the varieties, and to confine his attention to the best kinds. The material properties of the apple, are acid, (malic,) vegetable mucilage, or extractive matter, sugar, water, and the principle of flavour. In the manufacture of cider, the last of these properties is destroyed by the process of fermentation; the vegetable mucilage is separated, and settles in lees; and the sugar is converted into alcohol. The quality of cider fruit, therefore, materially depends upon the specific gravity of its unfermented juice, or upon the greater or less proportion which the sugar bears to the water. The heaviest must will give the strongest cider; and although we have no precise standard, it is believed that apple juice of the specific gravity of 1075, (pure water being 1000,) will be so strong, or contain such a proportion of spirit, as to prevent the acetous fermentation, in the ordinary temperature of our cellars. In other words, it is believed, that our *strongest* apples, (which have generally the least juice,) *and those only*, will produce a liquor, which, under good management, will retain a fine vinous flavour for years. From a belief in the correctness of this hypothesis, Mr. Buel has selected for cider the varieties which give the heaviest must. The new varieties introduced by the President of the London Horticultural Society, by crossing two approved kinds, as our breeders cross live stock, are preeminent for this property, and possess, besides, the advantages of youth; as will be seen by the following comparative statement, collected from the British horticultural writers:

Sp. gr. of the best old varieties.		*Do. new varieties of Knight.*	
Redstreak, . .	1079	Foxley, ...	1080
Fox whelp, .	1076	Downton pippin,	1080
Loan's pearmain,	1072	Grange apple,	1079
Orange pippin,	1074	Yellow Siberian,	1085
Old pearmain,	1079	Siberian Harvey,	1091

5. *Potatoes,*

Are cultivated on a comparatively large scale, and constitute a profitable crop. They are almost invariably manured with long dung, and have yielded from 200 to 450 bushels the acre. They are planted in drills, where there is no sod; the pieces at six and eight inches apart, covered with the back of a harrow drawn across the furrows; well harrowed when the shoots begin to appear above the surface; dressed once with the plough and hoe, and harvested with the plough and potato hook. The greatest product is procured in this way. Sometimes the seed is dropped in every third or fourth furrow, in ordinary ploughing of green sward, and of course covered with the plough, and the ground afterwards rolled and harrowed. Cultivated in this way, the crop has been 430 bushels per acre. Contrary to general practice, *moist* (not wet grounds,) are selected for this root. Our correspondent saw the last harvesting of three acres in a reclaimed swamp, which had been ploughed this year for the first time, and notwithstanding the extreme drought of the summer, the product was but a little short of 700 bushels. They were planted in hills. Mr. Buel is satisfied, from experiments, that moist, light soils, not only give the greatest product, but the best flavoured tubercles. This opinion derives weight from the high reputation of the Irish and Nova Scotia potatoes, which are grown amidst almost perpetual fogs.

6. *Live Fences.*

His farm being destitute of materials for dead fences, Mr. Buel has commenced in earnest the cultivation of hedges, and has already more than half a mile in different stages of growth. He has used the English white thorn, (*Cratægus oxyacantha,*) and two or three indigenous kinds, (we think the *C. coccinea* and *C. flava,*) the plants of the latter collected from the woods. The latter give stronger shoots and spines, and appear to be better adapted to the climate, and particularly to moist situations, than the European species. About 1100, gathered in this way, had just been planted. They are mostly planted in single rows, and some of them have been already splashed (though we think them yet too small for that operation,) according to the directions laid down by our friend Kirk, of Delaware. Others are planted in double, and some in triple rows, in quincunx form. These are expected to become a sufficient barrier without splashing. The whole are planted upon a level surface, previously prepared by the spade or a potato crop. and were clipped in June. Mr. Buel is encouraged by their promising appearance, and has collected the seeds of several plants, to extend his plantation and multiply his experiments. These are of the indigenous thorns already mentioned, of the three thorned acacia, or honey locust, (*Gleditschia triacantha,*) and of the white mulberry, (*Morus alba.*) He has also collected seeds of the sweet briar, (*rosa rubiginosa,*) to plant in his existing fences, where the quicks have failed to grow, or have died, from a belief that they will, by their thrifty growth, in two or three years, effectually close the vacancies.

7. *Turnips.*

His partiality for this crop is induced by a soil admirably adapted to their culture, and the certainty of profit. He confines himself to two kinds; the Swedish and the white flat—the latter comprising the varieties of green and red tops: the latter for the table, and the former principally for cattle. Both are raised as a second crop; the Swedes after clover, and the whites after small grains. The quantity annually cultivated, is six or seven acres. We were shown a field of two acres of flat turnips, which made the fourth crop grown on it in two summers, viz: clover and ruta baga the first year—barley and white turnips the second. The manure was applied to the second crop. The gross product, besides the clover, was 1500 bushels of turnips and 70 bushels of barley. The flat turnips are sometimes sown broadcast, and sometimes with the drill harrow, the last of July and beginning of August, and once cleaned and thinned with the turnip hoe. The Swedes are drilled in about the beginning of July, dressed twice with Robert Sinclair's cultivator, and thinned and cleaned once with the turnip hoe. The flat kind, and part of the other, find a ready market in the city; but the latter are principally reserved for cows and other stock in the spring, the pasture ground being very limited. The average crop of the Swedes is from five to six hundred, and of the others from two to three hundred bushels per acre. The maximum expense of these crops, including manure, does not exceed six cents the bushel, and the minimum is often below three.

8. *Grasses.*

Herdsgrass, (white and red top,) the smooth and rough stalked meadow-grass, and some other species, are indigenous. The white and red clovers, and timothy, have come in spontaneously, and the two latter have been annually sown. Orchard grass, tall meadow oat-grass, rye grass and lucern, have been cultivated. The timothy is preferred for hay, as containing the most nutriment, and being the best adapted to moist and permanent meadow grounds. The orchard grass, or cocks-foot, is sown with clover. It is fit to cut in the last of June, and it makes the finest perennial pastures. A piece which had been cut four years for seed, had annually sent up new plants from the seed scattered, until the sward had become uncommonly thick and firm. It endures drought better than other fibrous rooted grasses, grows quicker (the tall meadow oat excepted,) is more permanent, and is not affected by the shade of trees. The lucern was sown with winter rye, about the first of May, 1824, as recommended by a New Jersey correspondent of the American Farmer, and has done remarkably well. It is fed green to cows, hogs, horses, &c. The first cutting is begun about the 20th May, and the cutting may be repeated at intervals of fifteen to twenty-five days, according to the season. It comes in as a valuable auxiliary to the ruta baga, in making up for a deficiency of pasture. The climate appears to be too dry and warm for the rye grass; though a small patch, from seed sent by us (and received from that enlightened British farmer, Charles Champion, Esq.) to Mr. Buel, of a new variety, looked remarkably well. His experience has not been sufficient with the oat grass, to enable him to judge of it satisfactorily. Clover is employed as a food for vegetables, rather than as food for animals.

9. *Root and Stump Fence.*

We were struck with the novelty and economy of this. Stumps and roots have been taken out of the swamps and marshy grounds, cut and split for fuel, and piled as a fence for enclosures. When dried, they become hard, burn well, and contain much resin. Although they have constituted the principal fuel used in the dwelling for five or six years, the quantity remaining forms a fence sixty or eighty rods, and many stumps remain to be taken from the ground. They afford ample compensation for the labour of extracting and preparing them, in a neighbourhood where wood sells for four to seven dollars the cord of 128 cubic feet.

10. *Products.*

The following statement of these, and of their value, has been recently received. It does not include the products of a large garden, of the nursery, or of the dairy.

94	loads of hay, estimated at 60 tons, of which 40 are intended for market, at $10, is	$600 00
180	bushels wheat (by estimate,) at $1.	180 00
75	do. rye, at 50 cents, . . .	32 50
70	do. barley, sold at 81 cents, .	56 70
850	do potatoes, most of them sold at an average price of 46 cents.	391 00
200	do. corn, (by estimate,) at 50 cts.	100 00
320	do. turnips, sold at 37½ cents,	120 00
100	do. ruta baga, for market, 37½,	37 50
700	do do. for cattle, worth 10 cts.	70 00
13	do. grass seeds, orchard and tall oat, ...	32 50
3000	cabbages, (of 7000 put out,) sold at $1 per hundred, ...	120 00
		$1740 20

The ground employed for raising the above crops between 54 and 57 acres. Two labourers and a boy employed during the season, and about $25 expended for extra labour in harvest.

CLINE, ON THE FORM OF ANIMALS.[*]

(From the Agricultural Almanack for the year 1826, patronized by the Philadelphia Society for promoting Agriculture.)

It has been generally supposed that the breed of animals is improved by the largest males.—This opinion has done considerable mischief, and would have done more injury if it had not been counteracted by the desire of selecting animals of the best forms and proportions, which are rarely to be met with in those of the largest size.

Experience has proved that crossing has only succeeded in an eminent degree, in those instances in which the females were larger than in the usual proportion of females to males; and that it has generally failed when the males were disproportionably large.

The external form of domestic animals has been much studied, and the proportions are well ascertained. But the external form is an indication only of internal structure. The principles of improving it must therefore be founded on the knowledge of the structure and use of the internal parts.

The lungs are of the first importance. It is on their size and soundness that the health of an animal principally depends. The power of converting food into nourishment is in proportion to their size. An animal with large lungs is capable of converting a given quantity of food into more nourishment than one with smaller lungs, and therefore has a greater aptitude to fatten.

The Chest.

The external indication of the size of the lungs is the form and size of the chest, the form of which should have the figure of a cone, having its apex situated between the shoulders, and its base towards the loins.

The capacity of the chest depends upon its form more than on the extent of its circumference: for, where the girth is equal in two animals, one may have much larger lungs than the other. A deep chest therefore is not capacious, unless it is proportionally broad.

The Pelvis.

The pelvis is the cavity formed by the junction of the haunch bones with the bones of the rump. It is essential that this cavity should be large in the female, that she may be enabled to bring forth her young with less difficulty. When this cavity is small, the life of the mother and her offspring is endangered.

The size of the pelvis is chiefly indicated by the width of the hips and the breadth of the *twist*, which is the space between the thighs.

The breadth of the loins is always in proportion to that of the chest and pelvis.

The Head.

The head should be small, by which the birth is facilitated. Its smallness affords other advantages, and generally indicates that the animal is of a good breed.

The Muscles.

The muscles and tendons, which are their appendages, should be large; by which an animal is enabled to travel with greater facility.

The Bones.

The strength of an animal does not depend on the size of the bones, but on that of the muscles. Many animals with large bones are weak, their muscles being small. Animals that were imperfectly nourished during growth, have their bones disproportionably large. If such deficiency of nourishment originated from a constitutional defect, which is the most frequent cause, they remain weak during life. Large bones, therefore, generally indicate an imperfection in the organs of nutrition.

On the Improvement of Form.

The proper method of improving the form of animals, consists in selecting a well formed female, proportionably larger than the male. The improvement depends on this principle, that the power of the female to supply her offspring with nourishment is in proportion to her size, and to the power of nourishing herself from the excellence of her constitution. The size of the fœtus is generally in proportion to that of the male parent; and therefore when the female parent is proportionally small, the quantity of nourishment is deficient, and her offspring has all the disproportions of a starveling. But, when the female, from her good size and constitution, is more adequate to the nourishment of a fœtus of a smaller male than herself, the growth must be proportionately greater. The larger female has also a greater quantity of milk, and her offspring is abundantly supplied with nourishment after birth.

To produce the most perfect formed animal, abundant nourishment is necessary, from the earliest period of its existence until its growth is complete.

It has been observed, in the beginning of this paper, that the power to prepare the greatest quantity of nourishment, from a given quantity of food, depends principally upon the magnitude of the lungs, to which the organs of digestion are subservient.

When it became the fashion in London to drive large bay horses, the farmers in Yorkshire put their mares to much larger stallions than usual, and thus did infinite mischief to their breed, by producing a race of small chested, long legged, large boned, worthless animals.

A similar project was adopted in Normandy, to enlarge the breed of horses there by the use of stallions from Holstein; and, in consequence, the best breed of horses in France would have been spoiled, had not the farmers discovered their mistake in time, by observing the offspring much inferior in form to that of the native stallions.

Extract from Sir John Sebright's Letter on the Art of Improving the breeds of Domestic Animals.[*]

The best breeds, after having been obtained at a great expense, too frequently degenerate, from mismanagement. Gentlemen conceive, that if they have procured good males and good females, they have done all that is necessary to establish and to continue a good breed; but this is by no means the case.

Were I to define what is called the art of breeding, I should say, that it consisted in the selection of males and females intended to breed together, in reference to each other's merits and defects.

It is not always by putting the best male to the best female, that the best produce will be obtained; for should they both have a tendency to the same defect, although in ever so slight a degree, it will in general preponderate so much in the produce, as to render it of little value.

We must observe the smallest tendency to imperfection in our stock, the moment it appears, so as to be able to counteract it, before it becomes a defect.

Regard should not only be paid to the qualities apparent in animals, selected for breeding, but to those which have prevailed in the race from which they have descended, as they will always show themselves, sooner or later, in the progeny; it is for this reason that we should not breed from an animal, however excellent, unless we can ascertain it to be what is called *well bred;* that is, descended from a race of ancestors, who have, through several generations, possessed in a high degree, the properties which it is our object to obtain.

I do not find that any of the many advocates for breeding *in and in,* with whom I have conversed, have tried it to any extent; they say, that it is to perfect animals only that the practice applies; but the existence of a perfect animal is an hypothesis I cannot admit.

I do not believe, that there ever did exist an animal without some defect, in constitution, in form, or in some other essential quality; a tendency, at least to the same imperfection, generally prevails, in different degrees in the same family. By breeding *in and in,* this defect, however small it may be at first, will increase in every succeeding generation; and will, at last, predominate to such a degree, as to render the breed of little value. Indeed, I have no doubt but that by this practice being continued, animals would, in course of time, degenerate to such a degree, as to become incapable of breeding at all.

Many causes combine to prevent animals, in a state of nature, from degenerating; they are perpetually intermixing, and therefore do not feel the bad effects of breeding *in and in:* the perfections of some correct the imperfections of others, and they go on without any material alteration, except what arises from food and climate.

If the original male and female were of different families, by breeding from the mother and the son, and again from the male produce and the mother, and from the father and the daughter in the same way, two families sufficiently distinct might be obtained: for the son is only half of the father's blood, and the produce from the mother and the son will be six parts of the mother and two of the father.

Although I believe the occasional intermixture of different families to be necessary, I do not, by any means, approve of mixing two distinct breeds, with the view of uniting the valuable properties of both; this experiment has been frequently tried by others as well as by myself, but has, I believe never succeeded. The first cross frequently produces a tolerable animal, but it is a breed that cannot be continued.

SHEEP.

Sir—I have observed some remarks in your useful paper, on the different breeds of sheep, from the pen of that very able and public spirited improver of stock, Mr Powel, which I am led to notice on account of some errors into which he has been inadvertently led, and which, if not corrected, might mislead those who are about to engage in the propagation of that valuable stock. I allude more particularly to merinoes, as being by far the most valuable race of sheep in this or any other country.

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[*] Extracted from the Memoirs of the Penn. Agricultural Society.

[*] From the Memoirs of the Penn. Agricul. Society.

When this stock was imported into the United States, there were many rules laid down for enabling unskillful persons to judge of their properties, and Mr. Powel may have been led by these to adopt opinions which his own intelligent observation would soon have corrected: For instance—It was remarked by Chancellor Livingston and other writers of that period of inexperience, that the best merinoes were distinguished by large dewlaps, an exuberance of yolk, and a covering of wool over their faces and legs. Experience has taught those who have paid the slightest attention to the propagation of the animal, that neither of these marks are to be relied on, if indeed they are any guide whatever. The covering of wool on the head and legs is almost peculiar to young sheep; the pendant dewlap is often covered with coarse hairy wool, and the abundance of yolk is rarely found in the best woolled animal; nor is this ingredient at all necessary, much less "essential," as Mr. Powel supposes, for the "support of the fleece," whether he means by this expression, the preservation of the fleece, or the maintenance of its quality and value. An excessive secretion of yolk is probably a disadvantage both to the animal and the wool; it causes the adhesion of much dirt and hay seeds, which are injurious to the wool. If any person will take the trouble to try the strength of a lock of wool filled with dirt by excessive yolk, he will find it too tender for any useful purpose, and the more yolk the worse. Again, Mr. Powel says, "the sheep which produce the finest fleeces are not *necessarily* the best to form a breeding flock;" now I take the converse of this proposition to be true. It is by no means an ascertained fact, that diseased sheep have finer fleeces than healthy ones; but if it were so, I would insist that the sheep which produce the finest fleeces are necessarily the best to breed from. The solitary case of a sickly sheep is not worthy of consideration as an exception to the proposition; and in selecting merinoes, I would pay no regard to any thing but the fineness and uniformity of the fleece and their general healthiness. It is known that with all imaginable care in the breeding, the wool improves very slowly, whereas the form is quickly changed. The essential value of a merino is in its fleece; and the difference between that of a fine and an indifferent one may be estimated from the fact, that one class of wool makes cloth worth ten dollars a yard, while another class (to an unskillful eye not perceptibly coarser) makes cloth worth six dollars a yard; now two pounds of wool make the yard in either case, (the labour is not very materially different,) hence the first class is worth nearly two dollars per pound more than the second. The Saxon sheep are no doubt merinoes improved, where men pay better attention to their business than the indolent Spaniards have done; but it is evident, that in the improvement of the Saxon sheep, very little attention has been paid to their form; their superiority does not consist in the carcass, for they are generally very badly formed; but the wool is remarkably fine and more uniform throughout the fleece than any Spanish merinoes ever imported into this country.

Much is said of the Southdown sheep in England, and they begin to attract notice here among speculative men. Their mutton may be good, but I suspect its superiority is owing to the pasture on which they are generally fed, and their extensive ranges, from which, with the delicacy of taste peculiar to sheep, they pluck a greater variety of sweet grasses; they being rather a small bodied animal, are also better adapted to such pastures than those of heavier bodies, which require more food with less labour in the pursuit of it. But they are not a new stock in our country; I would undertake to find some of them in almost every flock of common sheep throughout a considerable portion of Pennsylvania and New Jersey; I have also seen them in Maryland. They have smutty faces and legs; the lambs, when young, are of a dusky brown, the wool shorter and closer than common sheep, with round bodies, and when four or five years old, the ewes almost invariably have no wool on their bellies, and they will at that age produce about 1½lbs. of wool each, the wethers 2lbs. or 2½lbs., they have the lightest fleece of any sheep I have ever seen, although their carcases are considerably larger than the merino; they are not esteemed a valuable race by our farmers, owing to the lightness of their fleeces. Further attention may change this estimate; but as their wool is not very visibly finer than that of the better kind of common sheep, and their mutton, with the same pasturage, not known to be better, and withal yielding so little wool, it is not likely that they will attract much attention here.

While on this subject, I will add another remark in reply to an objection I have somewhere seen, I think from the pen of the same intelligent breeder of stock, Mr. Powel, viz. that merino wool was less worthy of the attention of our farmers, because it was not adapted to the common uses of life and clothing of the poor. To this I would observe, that it is by the luxuries of the rich that the poor are maintained, not only the poor, but the industrious in every condition of life derive benefit from these luxuries. The value of a fine coat is made up by the quality of the wool and the labour bestowed on it. The grower has his profit in the price of the first, and the manufacturer in that of the last. The object of every man who labours is profit, and if a farmer can raise wool worth 100 cents per lb. at the same expense that he can raise another kind worth 50 cents, he ought to consult his interest, and what ever increases his profit will advance the interests of all who are dependent on him. We might as well be told that we ought to raise rye instead of wheat, as coarse wool instead of fine, because the first was used by the poor chiefly—or that instead of breeding cattle with a view to increase the proportions of their most valuable parts, (which are paid a high price for and consumed by the rich,) it would be as well to have all neck and shins to feed the poor with. But I need not enlarge on a subject so plain. The error of these opinions arises from not adverting to the fact, that whatever is consumed by the rich is the production of some branch of industry among those who labour, and the greater the demand for luxuries, the better it is for those who produce them.

COLUMELLA.

LARGE HOGS.

The weight of two hogs, slaughtered in Frederick county, on Wednesday, 21st. December, property of John Cockey, Esq. were as follows:

	lbs.
1 Hog, 2 years old last August, weighed	626½
1 do. 1 year old last July, - -	511

INTERNAL IMPROVEMENT.

Progress of Internal Improvements in Ohio.

Extract from the Message of Governor Morrow to the Legislature of Ohio, 7th December, 1825.

The operations of the Board of Commissioners appointed by your body at the last session, under the provisions of the act for opening a navigable Canal from Lake Erie to the Ohio river, and from Dayton to Cincinnati, have been attended with that success which promises the most favourable result to those grand and important public works. The loan of four hundred thousand dollars, authorized by that law, has been negotiated by the Board of Commissioners of the Canal Fund, at an interest little exceeding five per cent. per annum, but a small part of which will be charged upon the state until the principal shall have been actually expended. The canal Commissioners have, within the past season, placed under contract, thirty-four miles on the Cuyahoga summit, ten and an half on the Licking, and two and an half on the embankment of the reservoir on that summit, and forty-two miles on the Miami line; making in the aggregate, eighty-eight and three quarter miles. To complete those contracts on the different parts of the lines, and which embrace parcels of each variety of works to be performed, will require a sum little short of eight hundred thousand dollars; falling somewhat within the estimate made by the Engineer, and reported to the General Assembly at their last session, by the canal Commissioners. In the performance of this work, from which, on its completion, a large revenue may with certainty be anticipated, economy would dictate all that prompt exertion and expedition which would be consistent with the public resources, and the advantageous application of them. But, while on the one hand it should not be unnecessarily delayed, and the state too long subjected to the payment of interest on the funds expended on its partial construction, and before it has become productive; so on the other, it should not be pressed forward so hastily as to render taxation burthensome, or materially increase the price of labour, and thereby add to the expense of the work. It is by pursuing a proper medium, that the public interest will be best promoted, and the greatest advantage secured to the state.

It appears that after meeting the existing contracts, there will remain of the loan contracted, and that to be contracted for in the ensuing year, less than the sum of two hundred thousand dollars. Hence new contracts could only be made to that amount within the year. It is not doubted, that a much larger sum might be advantageously employed, without at all unfavourably affecting the price of labour. From the present state of the Treasury, it is satisfactorily ascertained, that the interest on a loan of one million of dollars, which is four hundred thousand dollars in addition to that now authorized, could be met without a resort to any additional taxation. On every consideration, it would appear proper, that the Commissioners of the Canal Fund, should be empowered to contract for a loan of at least one million of dollars in the ensuing year; and it is worthy of consideration, whether, under certain restrictions, policy would not require, that they should have power to contract a loan for the whole amount estimated as necessary to complete the line of canal now directed to be opened. Such power might be used with advantage to the interests of the state; and were the power granted, the Commissioners could avail themselves of any favourable state of the money market that should occur. In case a loan to the amount required for completing the whole work should be effected, the interest may be kept within the means the state possesses for its discharge, by contracting for its payment on instalments, and the interest to commence when respectively payable.

The experience of the present year carries with it the strongest and best assurance of safety in the progress, and perfect success in the final consummation of that important work. A rapidly increasing population—the industry of our citizens—the growing wealth and resources of our country, induce a strong belief, that the undertaking that had been deemed so arduous, may be effected without imposing an inconvenient burthen on the community; while the prospect of incalculable advantages, which it holds forth to the people, and the certain benefit which it will extend to posterity in ages to come, show, that it is an object worthy your earnest attention and fostering care. To the successful progress of the work, however, it is essential that a steady course of policy shall be pursued; that the funds which have been pledged to that object be held inviolate and unimpaired; and that proper accountability and economy be observed in the expenditures.

The propriety is suggested of the appointment of an officer, whose office shall be kept at the seat of government, and whose duty it shall be to receive and settle the accounts of the Commissioners of the Canal Fund, and of the Canal Commissioners; to enter his proceedings in books to be regularly kept; and to file and preserve all papers belonging to his office—subject to the inspection of the Legislature.

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR

Previous to a perusal, a mutual promise should be made, that if the husband reads with attention the whisper addressed to HIM, the wife will read, with equal attention, the whisper addressed to HER. And each should remember, that of all the pleasures that endear human life, none are more worthy the pursuit of a rational creature than those which flow from mutual returns of conjugal love. A happy marriage comprehends all the pleasures of friendship, all the enjoyments of sense and reason, and all the sweets of life. "To live without feeling or exciting sympathy," says Dr. Johnson; "to be fortunate without adding to the felicity of others, or afflicted without tasting the balm of pity,—is a state more gloomy than solitude: it is not retreat, but exclusion, from mankind."

A Whisper to the Husband.

Chapter I.

INTRODUCTORY REMARKS.

"Art thou my wife?—is this kind Heaven's decree?
Then let me prize what Heaven design'd for me!"

One of the most brilliant traits that can adorn the character of man, is the quality which composes a good husband: and he who deserves a contrary appellation, proclaims, in the strongest terms, his want of religion, his want of feeling, and his want of understanding. He cannot be a *good* man; because he violates one of the most sacred commands of God. He cannot be a *brave* man; because a brave man scorns to use with tyranny the power with which he is invested. And he cannot be a *feeling* man: Oh, no! a man of feeling will never draw tears from those eyes which look to him for comfort, or voluntarily pain a heart that has given up so much for his sake!

Remember, your wife has left her home, her parents, and her friends, to follow you and your fortunes through the world. She has unreservedly committed her happiness to your keeping; and in your hands has she placed her future comfort. Prize the sacred trust; and never give her cause to repent the confidence she has reposed in you.

In contemplating her character, recollect the materials human nature is composed of, and do not expect perfection. Do justice to her merits, and point out her faults; for I do not ask you to treat her *errors* with indulgence: *by no means!* but then endeavour to amend them with wisdom, with gentleness, and with love.

Allow me here to introduce a few lines taken from an admired little book, The Economy of Human Life.—"Take unto thyself a wife, but examine with care, and fix not suddenly: on thy present choice depends the future happiness of thee and thy posterity. If much of her time is destroyed in dress and adornments, if she is enamoured with her own beauty, and delighted with her own praise; if she laugheth much, and talketh loud, if her foot abideth not in her father's house, and her eyes with boldness rove on the faces of men, though her beauty were as the sun in the firmament of heaven, turn thy face from her charms, turn thy feet from her paths, and suffer not thy soul to be ensnared by the allurements of thy imagination." "But when thou findest sensibility of heart joined with softness of manners, an accomplished mind with a form agreeable to thy fancy; take her home to thy house, she is worthy to be thy friend and companion." "Reprove her faults with gentleness; exact not her obedience with rigour; trust thy secrets in her heart, her counsels are sincere, thou shalt not be deceived." "She is the wife of thy bosom, treat her with love; she is the mistress of thy house, treat her with respect; she is the mother of thy children, be faithful to her bed."

Chapter II.

ON THE FEMALE CHARACTER.

If your wife is an amiable woman, *if*, as the wise man says, *there be kindness, meekness, and comfort in her tongue, then is not her husband like other men.* (Eccles. xxxvi. 23.) Prize therefore her worth; understand her value: for great indeed is the treasure you possess. Speaking of women, a late writer says, "I consider a religious, sensible, well-bred woman, one of the noblest objects in creation: her conduct is so consistent and well regulated; her friendship so steady; her feelings so warm and gentle; her heart so replete with pity and tenderness." No where does she appear to so much advantage as in the chamber of the sick; administering to the wants of the sufferer, sympathising in his pain, and pointing the way to his heavenly rest: as our great Scottish bard says,—

"When pain and anguish wring the brow,
A ministering angel thou!"

O! how much more lovely and interesting to the heart does she appear in such scenes, than in all the blaze of beauty, armed for conquest, and decorated for the brilliant exhibition of a ball-room.

Among the many amiable qualities of woman, I cannot help noticing two, with which she appears gifted in a peculiar degree—resignation and fortitude. I remember hearing an eminent physician say, that he has been constantly struck with the superior quietness and resignation with which women supported bodily pain and suffering, as well as all the other evils of human life! When I speak thus, I of course allude to the sensible and superior part of the sex. Let not, therefore, the military or naval hero suppose that fortitude is confined to his own profession; that it could only be met with on the plains of Waterloo, the waves of the ocean, or the burning deserts of Egypt! No: it may also be sought and found in the gentle breast of woman. It accompanies her to the retired and silent chamber; it supports her under pain and sickness, sorrow and disappointment, it teaches her to sympathize with her husband and all around her, and to inspire them with patience by her words and example. And while she seeks no notice, no reward, but the regard and approbation of her heavenly Father, she meekly acquiesces in his divine will, and says under every trial, "*Father, not* MY *will, but* THINE *be done!*"

Has it never been remarked, how very superior, in point of discretion, woman is to man? Now, reader, do not mistake me. I mean not to say she possesses more *sense* than man: in this particular, man claims, and we allow him, the prerogative; though, certainly, it is not *every* instance that proves its truth. But, in the quality of *discretion*, woman is decidedly and undoubtedly his superior. Unless it particularly concerns *himself*, a man seldom looks to the future consequences of what he either says or does, especially in small matters, or common-place occurrences. Now a sensible woman sees at once the *fit* from the *unfit*, attends to the minutiæ of things, and looks through existing circumstances to their probable result. In short, a proper definition of the word *discretion* would exactly convey a just idea of my meaning.

Mrs. H. More says, "There is a large class of excellent female characters, who, on account of that very excellence, are little known; because to be known is not their object. Their ambition has a better taste: they pass through life honoured and respected in their own small but not unimportant sphere, and approved by Him, 'whose they are, and whom they serve,' though their faces are hardly known in promiscuous society. If they occasion little sensation abroad, they produce much happiness at home. These are the women who bless, dignify, and truly adorn society. The painter, indeed, does not make his fortune by their sitting to him; the jeweller is neither brought into vogue by furnishing their diamonds, nor undone by not being paid for them; the prosperity of the milliner does not depend on affixing their name to a cap or a colour; the poet does not celebrate them; the novelist does not dedicate to them;—but they possess the affection of their husbands; the attachment of their children; the esteem of the wise and good; and, above all, they possess His favour, 'whom to know is life eternal.'"—O! proud lords of the creation, if Heaven, in its great kindness, has blessed you with such a wife, bright indeed rose the sun on your nuptial morn: prize her, love her, honour her, and be it the study of your life to make her happy.

But the sacred volume places the value and importance of domestic virtues in the female character, in a point of view at once more grand and elevated than any modern production, as may be plainly perceived in the following extracts.—"As the sun when it ariseth in the high heaven, so is the beauty of a good wife in the ordering of her house. The grace of a wife delighteth her husband, and a silent and loving woman is the gift of the Lord. A shamefaced and faithful woman is a double grace, and her continent mind cannot be valued. Blessed is the man that hath a virtuous wife, for the number of his days shall be double. A virtuous woman rejoiceth her husband, and he shall fulfil the years of his life in peace." (*Eccles.* xxvi.) "Hast thou a wife after thy mind? forsake her not; and give not thyself to a light woman." (*Eccles.* vii. 26.) "A good wife is a good portion, which shall be given in the portion of them that fear the Lord." (*Eccles.* xxvi. 3.) "Well is he that dwelleth with a wife of understanding." (*Eccles.* xxv. 8.) "A friend and companion never meet amiss: but above both is a wife with her husband." (*Eccles.* xl. 23.) "He that getteth a wife beginneth a possession, a help like unto himself, and a pillar of rest. Where no hedge is, there the possession is spoiled: and he that hath no wife, will wander up and down mourning." (*Eccles.* xxxvi. 24, 25.) "Rejoice with the wife of thy youth, and let her be as the loving hind and pleasant roe." (*Prov.* v. 18, 19.) "Live joyfully with the wife whom thou lovest all the days of the life of thy vanity." (*Eccles.* ix. 9.) "Who can find a righteous woman? for her price is far above rubies. The heart of her husband doth safely trust in her. She will do him good and not evil all the days of her life. She seeketh wool and flax, and worketh willingly with her hands. She is like the merchants' ships; she bringeth her food from afar. She riseth also while it is yet night, and giveth meat to her household, and a portion to her maidens. She considereth a field, and buyeth it: with the fruit of her hands she planteth a vineyard. She girdeth her loins with strength, and strengtheneth her arms. She perceiveth that her merchandise is good: her candle goeth not out by night. She layeth her hands to the spindle, and her hands hold the distaff. She stretcheth out her hand to the poor; yea, she reacheth forth her hands to the needy. She is not afraid of the snow for her household: for all her household are clothed with scarlet. She maketh herself coverings of tapestry; her clothing is silk and purple. Her husband is known in the gates, when he sitteth among the elders of the land. She maketh fine linen, and selleth it; and delivereth girdles unto the merchant. Strength and honour are her clothing; and she shall rejoice in time to come. She openeth her mouth with wisdom; and in her tongue is the law of kindness. She looketh well to the ways of her household, and eateth not the bread of idleness. Her children arise up, and call her blessed; her husband also, and he praiseth her. Many daughters have done virtuously, but thou excellest them all. Favour is deceitful, and beauty is vain: but a woman that feareth the Lord, she shall be praised." (*Prov.* xxxi. 10—30.)

(*To be continued under the heads of General Conduct—Constancy and Fidelity—Domestic Habits—Absence—Expenditure—Increase of Family—Conclusion.*)

MISCELLANEOUS.

MAL'ARIA OF MARSHES.

Substance of a paper read by M. Gaetano Giorgini, at the Academie Royale des Sciences, (Paris,) July 12, 1825, *and recently published in the Annales de Chemie et de Physique.*

M. Gaetano begins by observing, that man, better than any other organized being, adapts himself to all climates, living in the middle of the burning sands of Africa, as well as in the midst of the eternal ice of the polar regions. Nevertheless, he finds in the insalubrity of the air in some places causes of destruction, where the temperature and the fertility of the ground otherwise provide him with the means of happiness and opulence. The causes of this insalubrity are different, but the principal ones are the bad quality of the water, the nature of the soil and its vegetable productions, the exhalations which arise from it, but, more frequently, the neighbourhood of stagnant waters, and the nature of their sediment. These causes sometimes disappear as the country is cultivated, and life and health are preserved in districts before deserted and inhospitable. It is of great consequence, therefore, that the causes and cures of this insalubrity should be accurately known. Most generally, the insalubrity of the air is occasioned by the vicinity of stagnant water; but this cause is modified by a multitude of circumstances, often difficult to separate and distinguish. The neighbourhood of marshes is not always unhealthy, and not always to the same degree. This is a truth which has long been known. Vitruvius, Silvius, Donat, Pringle, and Lancisi, have all remarked, that one of the principal causes of the unhealthiness of marsh lands is the overflowing of the fresh-water marshes by the waters of the ocean, for a longer or a shorter period during the summer. It has been distinctly stated, that this was the cause of the terrible diseases so well known in Italy under the name of *malattie di cattiva aria.* As proof of this, the author refers to the salt marshes in the south of France, the marshes on the coasts of the Mediterranean, in the kingdom of Naples, in the Ecclesiastical States, and in Tuscany, the neighbourhood of which, abhorred and depopulated, presents a striking contrast with the fertility and population of other provinces in the interior, situated near marshes of equal extent. But a more complete proof of this assertion will be found in the following interesting account:

On the south of the Ligurian Appenines, there is a marshy district, bounded on the west by the Mediterranean, and extending about twelve miles in this direction; on the south by the Serchio; on the east by the foot of the Appenines; and on the north by the Frigido—a torrent which rises nearly at the foot of the Appenines, on the estate of *Massa de Carrare,* and falls into the sea after a course of 3 or 4 Italian miles. The width of this plain from the sea to the foot of the mountains, on the east side, is between two and four miles. It is traversed from east to west by several rapid streams, rising in the mountains and losing themselves in the marshes, or discharging themselves into the sea. Including the Frigido and the Serchio, are those which discharge themselves in the rivers of Camajore, and of Pietra Santa or Finmetto. They have no communication with the marshes which they divide into three separate and distinct basins. The marshy plain, may be considered as having been formed by the sands brought down by the Arno and the Serchio into the gulph, which formerly extended to the foot of the mountains in the east In fact the bottom of the marsh is sand, like that of the sea shore, which forms a sort of dyke, elevated a few feet only above the level of the sea, and rising from it very gradually. What renders this conjecture probable, is, that the deposites from the Arno and Serchio, are now continued, and increase the breadth of this dyke four or five bracci every year, so that the sea appears to retire every year the same distance

It may easily be comprehended how the Arno and Serchio, advancing their *embouchure* further into the sea, and in the midst of the alluvial matter they bring down, have formed the sort of dyke on the side which bounds the marshes of the lake of Massaciuccoli de la Torre and de Motrone, and of the lake de Perotto. Originally, it is probable these formed only one continued marsh, which was subsequently divided into the three basins mentioned above by the alluvion of the Camajore and the Pietra Santa, which, like the Serchio and Frigido, have made themselves a course in the midst of the stones and vegetable matter they brought with them from the mountains, and with a layer of which, of greater or less thickness, they covered the neighbouring plains. The small quantity of rain and spring water which runs or falls into these basins is discharged slowly into the sea, either by natural or artificial channels, which pass through a dyke of sand on the coast. Of these there are three; 1st, for the principal basin of the lake Massaciuccoli, the outlet of Barlamacca; 2d, for the lesser marshes and ponds of the plains of de la Torre and Motrone, the outlets of Motrone and Tonfala; 3d, for the small lake of Perotto, and for the marshes in the neighbourhood, the outlet of Cinquala. The level of these several ditches or sewers is very little higher than the sea during the ebb, and is lower than the level of the sea during the flood, though the rise and fall of the tides is very trifling in this part of the Mediterranean. Before the erection of the sluices, hereafter to be mentioned, the sea water, on the tide rising, or on the level of the ocean being elevated by any other cause, entered into these ditches, and forced back the noxious drains, and unless the streams were particularly swollen by rains, the sea water spreads itself over the basins, to the foot of the mountains, particularly during a "*libeciata,*" or north east wind, when the boisterous ocean rolled its waves far into the canals. The mixture of salt and fresh water which resulted, being slowly and seldom renewed, putrefied, and spread all around the most complete and the most murderous infection.

I shall not stop, says Mr. Giorgini, to describe the condition of the population in those parishes nearest to the marshes and to Viareggio, which was then only a collection of fishermen's huts, situated near an old tower, which the wisdom of that age, not philanthropic, had converted into a prison for those who were sentenced to the galleys. The effects of the *Mal'aria* are too well known that I should describe them. In the places I have mentioned they occurred every year, in all their horror. The natives, few in number, and perpetually attacked with diseases of the liver or the spleen, presented through the whole year the afflicting spectacle of feeble and languishing children, of men barely convalescent, in the midst of whom age was unknown. At the close of the summer, they were attacked by more severe disorders, and those who were only attacked with intermittent fevers, which gave way at the approach of winter to repeated doses of bark, esteemed themselves happy. In vain the greater number of them fixed their dwelling on the hills, or in the interior, and only went into the plains for the indispensable labours of cultivation, thus seeking to escape the more deleterious influence of the night; fever and death followed them to their miserable abodes. Things were so bad, that the culture of the olive, with which the hills on the border are richly covered, was entirely done by strangers, who came during the winter to till a soil, the very fertility of which was an evil, for it served to lure fresh victims. If the natives themselves could not escape, woe to the stranger or the traveller who forgot his situation, and passed a single night in the months of August or September, in these infectious countries. His death was certain. Such was the situation of the country before 1741, and I have described it without exaggeration, and from public documents.

As early as the year 1714, Gemignano Rondelli recommended a sluice and gates to separate the water of the ocean from the water of the marshes; but it was not till 1740 that this work was begun, at the outlet of Barlamacca, and in 1741 it was completed. Gates were constructed, the doors or valves of which opened outwards, and permitted the waters of the marshes to flow off, while they closed against the ingress of the ocean, and kept its water from entering. The year following the completion of this work, the *Mal'aria* did not appear either at Viareggio, at Massaciuccoli, at Quiesa, or in the more distant parts of the basins of Motrone and Perotto. From that time, that part of the population, not wholly exhausted, was restored to health and vigour, and has ever since gone on increasing. Viareggio has grown to be a considerable town, and every suspicion of unhealthiness has so far disappeared, that the best families of the city of Lucca have built themselves villas and palaces at Viareggio, which they inhabit during the summer, to enjoy the salubrious sea breezes, and indulge in the pleasures of baths and society. If any doubts could remain as to the cause of this improvement, they would be removed by two unfortunate events. In the summer of 1768 and 1769, Viareggio, and the parishes near the lake Massaciuccoli, were again the prey of disease. In the former, out of 1330 souls, 170 died in these two years, making 1 in 15; while, in the following year, the mortality was only 1 in 40. It was ascertained, that the cause of the mortality was, that the sluices had decayed, and had allowed the sea water to enter in these two years; and after the injury had been repaired, the place became again healthy. In 1784 and 1785 the same neglect occurred, followed by the same consequences. Of 1898 inhabitants, 1 in 20 died in the year 1784; and in 1785, of 1834 persons, 103 fell victims to disease. In 1784 there were, according to the reports presented to the government, 1200 sick persons out of the 1898 inhabitants of Viareggio. This epidemic also ceased as that of 1769, on the sluices being repaired.

After this experience, it was to be expected that similar works would be erected for the basins of Motrone, and for the lake of Perotto, but no! the unfortunate inhabitants of the plains of Camajore, of Pietra Santa, and particularly of Montignoso, a town which suffers remarkably from the influence of the marshes of Perotto, were destined to remain in this miserable condition, which was rendered more miserable by knowing that it might be so easily remedied. Some difficulties, it appears, were in the way of accomplishing so desirable an object, owing to the proximity of the two states of Lucca and Tuscany; and M. Giorgini bestows praise which is well merited, apparently, on the Chevalier Matteucci, sent as an envoy from Lucca, and afterwards as minister of Lucca, for his exertions in getting these difficulties removed. The business was agitated in 1804, and in 1808 the Chevalier recommended, till a sluice could be constructed at Cinquala, that the inhabitants of Montignoso should all be forcibly removed during the summer. His advice was followed, and in 1809, 1810, and 1811, the people were all forced to leave their wretched habitations, or rather tombs. In 1812, a sluice was completed at Cinquala, and from that time, the air of Montignoso has been as healthy as that of Viareggio. The salutary influence of this measure extended itself to the villages of Querceta, Pietra Santa, and Vallechia, though in less degree, towards the ponds of Motrone. To complete the work, it was necessary that sluices should be erected at Motrone and Tonfalo, and M. Matteucci having the charge of the principality under the provisional Austrian government, and not willing to leave the good work incomplete, employed his authority in aid of the determination taken by the municipalities of Camajore and Pietra Santa, to construct these two sluices at their expense. The one at Motrone was begun in 1818, and completed the following year, while the less important one at Tonfalo was not completed till 1821. Since that time, the diseases arising from Mal'aria have ceased at all points, and there is no more danger of disease, except the sluices should be neglected, which the inhabitants ought to regard as their palladium.

M. Giorgini adds to his interesting account, some tables of the population of this once pestilential neighbourhood, and proposes some questions as proper for inquiry by scientific men. Supposing that neither of these subjects would have much interest for our readers, we shall merely state the result of his tables. The population of the arrondissement of Viareggio, in eleven parishes, which, in 1733, amounted to 1509; and in 1823, they amounted to 9408—so that in these 90 years, the population has doubled in 36 years. A similar increase has taken place in the other districts since the sluices have been erected, proving the utility of the measure, and exciting much surprise, after the success of the first experiment, that so many years should have elapsed before the whole was completed.

SPORTING OLIO.

Mr. Williams' celebrated horse Roman.

Childers.
Squint, Snake,
Marske, Blacklegs,
Eclipse, Spelitta,
King Fergus, Tuling's Polly,
Hambletonian, Highflyer Mare,
ROMAN { Camillus, Faith,
Leon Forte, Eagle,
Tambarine, Trumpeter,
Crane, Highflyer,
Middlesex, Snap, (dolphin
Miss Cleveland, Regulus, by Go
Bridge, Bay Bolling's Son,
Childers Mare.

This celebrated horse was purchased of the Earl of Warwick, in March last, by Mr. Charles Williams, of Boston, at present residing in London. He is a beautiful bay, with black legs, and not a white hair; stands 15 hands 2 or 3 inches, and is the best bred and most powerful blood horse ever sent to this country. He has great bone, fine action, and excellent temper, and has proved himself one of the fleetest and most powerful horses in England. For walking, trotting, and racing, he is unrivalled. He won at Morpeth, beating Young Windall, Cottage Girl, Fannus, Young Glendall, and four others and, two days after, again beat Young Glendall, Shepherd, and a Bucephalus filly. At Carlisle, he beat Jack Tar and Monito; and at Middleham, he won a sweepstakes against Antonio, Rosary, Lightning, Little Thomas, and Carfacaratadaddera. At Newcastle, he won the King's plate, 4 miles, beating Awful, Boroughman and Lightning; and at York, won a match against Pacha. Again at Middleham he won a sweepstakes, beating Shylock and Trim. At Beverley he won the gold cup, beating Pawlowitz, Thunderbolt filly, Cottage Girl, Cambyses and Wildboy, and the club plate at Cheltenham, beating the Fyldemar filly, Phenix and Ethelinda.

Roman was bred by Mr. Riddell. He was got by Camillus (the best blood in England,) the son of Hambletonian, who, in 1779, won 100,000*l.* at Newmarket, in the great match against Diamond. King Fergus, the sire of Hambletonian, was the son of Eclipse, for whom his owner, O'Kelly, refused 16,000*l.* Through his dam, Leon Forte, he (Roman) is descended from Tambarine—Crane by Highflyer, who never paid forfeit and was never beaten, and from Regulus, the Godolphin, and Childers. His pedigree has been traced in the stud-book of the Clerk of the Newmarket course through eight generations of the highest bred horses and mares in England, without a single cross of inferior blood. Extract from the stud-book:—

"Roman, late the property of the Earl of Warwick, by Camillus, dam Leon Forte. Leon Forte was bred by Mr. Watt, in 1808, got by Eagle; her dam, Tambarine, by Trumpeter—Crane by Highflyer—Middlesex by Snap—Miss Cleveland by Regulus—1815, bay colt, Roman, by Camillus.

Mr. Riddell."

"*Performances* in 1819—5 *prizes.* At 4 years old—50gs. at Middleham, King's plate of 100gs. at Newcastle-on-Tyne, 100gs. at York, 100*l.* at Doncaster, and 68*l.* 1*s.* at Richmond—beating Antonio, Rosary, Lightning, Carfacaratadaddera, and Little Thomas, 2 miles—Awful, Boroughman, and Lightning, 4 miles—Pacha by Selim, 2 miles."

"*Performances in* 1820—4 *prizes.* At 5 years old—45gs. at Middleham, gold cup at Beverley, 70gs. at Cheltenham, and gold cup at Hereford—beating Pawlowitz, b. f. by Thunderbolt, Cottage Girl, Cambyses, and Wildboy, 3 miles—Phœnix, Ethelinda, and ch. f. by Fyldemar, 2 miles—Thyrsis and Charming Molly, 3 miles—Shylock and Trim, 1½ mile."

THE FARMER.

Baltimore, Friday, December 30, 1825.

☞Husbands are particularly requested not to conceal from their good ladies, the "Ladies' Department" of *this*, and succeeding numbers of the American Farmer.

Ladies are respectfully notified, that *every* number of the Farmer contains some columns especially dedicated to their amusement or information—besides the valuable recipes which generally apply to domestic economy.

☞ The Editor has for sale, having no use for him, a thorough bred horse colt, of uncommon promise, 2 years old the 26th February next—now very nearly 15 hands high.

Tobacco.—Inspections the last week, 31 hhds.

CONTENTS OF THIS NUMBER.

Notes on Judge Buel's successful System of Farming on Light Land, near Albany, New York, with estimates of expense and profit—Cline on the Form of Animals—Sir John Sebright on Improving the breeds of domestic Animals—Columella on Sheep—Weight of large Hogs in Frederick co., Md.—Progress of Internal Improvement in Ohio, from Gov. Morrow's Message—A Whisper to a Newly-Married Pair—Mal'aria of Marshes—Pedigree and Performances of Mr. Williams' celebrated horse Roman—Editorial.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	33	35		
COFFEE, Java, ...	—	18	19		25
Havana, ...	—	15¼	17¼	18	20
COTTON, Louisiana, &c.	—	18	20		
Georgia Upland, . . .	—	15	16		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33		37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	1 10	1 12		
FLOUR, Superfine, city,	bbl.	4 75	5 00	6 00	6 50
Extra . . . . do.	—	5 00	5 50		
Fine, ...	—	4 75			
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	6 00		5 50	
GRAIN, Indian Corn, .	bush	55	67		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	70	90		
do. Red, ...	—	80	85		
Rye, ...	—	54	55		
Barley, ...	—	95	1 00		
Clover Seed, Red . .	—	4 75		5 25	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	bush	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36		
Peas, Black Eyed, . .	—	1 00		1 50	
Beans, White, ...	—	1 50		1 62	
HEMP, Russia, clean, .	ton	200			
Do. Country	—	120	130		
HOPS, ...	lb.	27	29		
HOGS' LARD, ...	—	9	10	12	
LEATHER, Soal, best,	—	26	27		
MOLASSES, sugar-house	gal.	45			
MEAL, Corn, kiln dried,	bbl	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	1 87½	2 00		
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	1 75			
OIL, Whale, common, .	gal.	32	35		
Linseed, ...	—	90	95		
PORK, Baltimore Mess,	bbl	13 00			
do. Prime, . . .	—	9 75	10 00	12 00	
PLASTER, cargo price,	ton.	5 75			
RICE fresh, ...	lb.	3½	3¾	6	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	5¼	7¼	10	12
WHISKEY, 1st proof, .	gal.	26	27½	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37½	50	
SUGARS, Havana White,	c.lb.	13 50			
do. Brown, . .	—	10 75	11 00		
Louisiana, ...	—	10 00	11 00		none
Leaf, ...	lb.	19	22	20	25
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	75		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	18	18½	25	
SALT, St. Ubes, ...	bush	43			
Liverpool Ground . .	—	50	52	62	
SHOT, Balt. all sizes, .	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 50		
Lisbon, ...	—	1 15	1 20	1 62	1 75
Claret, ...	doz	4	9		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled,	—	33	35		

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AGRICULTURE.

DOMESTIC MANUFACTURE OF SILK AND BRANDY.

[The proceedings in Congress on the interesting propositions of Mr. Miner, of Pennsylvania, which we publish below, have brought to mind the following memorial, which was recently sent to us by a distinguished member of the Legislature of South Carolina; to show the progress of the publick mind in the development of our agricultural resources, and the great probability of the successful establishment of new and profitable branches of industry, to which the labour of the country may be diverted from others, in which production has grown out of all proportion to consumption, and which have, of course, become losing concerns. We understand that the objects sought by the memorialists have been granted by the Legislature of South Carolina, and we shall not fail, with the aid of many and good friends in that state, to mark the growth of the vine and the silk worm. Mr. Miner is entitled to the thanks of the friends of agriculture, if it be only for shewing, that in the din of conflicts amongst other interests for all they can get of artificial guards and legislative protection, she, too, has a voice to be heard.]

In Congress, 29th December, 1825.

On motion of Mr. Miner, of Pennsylvania, it was

Resolved, That the Committee on Agriculture be instructed to inquire whether the cultivation of the mulberry tree, and the breeding of silk-worms, for the purpose of producing silk, be a subject worthy of legislative attention. And should they think it to be so, that they obtain such information as may be in their power, respecting the kind of mulberry tree most preferred; the best soil, climate, and mode of cultivation—the probable value of the culture, taking into view the capital employed—the labour and the product—together with such facts and opinions as they may think useful and proper.

Resolved, That the Committee inquire whether any legislative provisions are necessary or proper to promote the production of silk.

Mr. Miner said, that he held in his hand a resolution which he intended to offer for consideration; but before it was read from the chair, he would say one word to bespeak for it a favourable reception. Its object was to direct the Committee on Agriculture, to make some inquiry relative to the cultivation of the mulberry tree and the breeding of silk-worms for the production of silk. That this was a matter of more importance than might on the first impression be supposed, Mr. Miner stated, would be seen, by referring to the Report from the Treasury of last year. He there found that the value of silk imported was $7,203,338* an immense amount; that the exports of wheat flour, Indian corn and meal, amounted to $6,713,595. So that the importation of silk exceeded the exportation of bread stuffs, by near half a milion; that the export of tobacco amounted to $4,855,566; the products of the sea to $1,610,990; of the forest to $4,889,646. Compared with either of these, the importance of our silk trade would be apparent, and the value of the production of the article might be inferred. Mr. M. did not know at present, what legislative measures, or whether any, would be proper; but the Committee could judge: he rather looked to advantage from the Committee obtaining and spreading abroad, in their report, all the information that could be obtained, which might arouse publick attention to the subject, and convey valuable information.

MEMORIAL

To the honourable the President and Members of the Senate of the State of South Carolina.

The respectful memorial of Antonio Della Torre and James C. W. McDonnald, sheweth—that considering the very serious changes which have taken place in this state within a few years, and the prospect of the more extended cultivation of cotton, (the chief staple of South Carolina,) in other states of this Union, in South America generally, in the East Indies, in Mexico and in Egypt; your memorialists have concluded that the investment of their capital in the cultivation of cotton will ultimately prove of very questionable advantage.

In the examination of the mode by which they might best serve themselves, your memorialists are convinced that they have discovered what would be of incalculable advantage to the state at large. The principle is no novelty. It is admitted by political economists, that the introduction of a new and valuable article of culture into an agricultural country is the clearest benefit to the public; your memorialists will introduce two new articles, capable of the most extended culture. The productions to which they allude are of this description: they are consumed in South Carolina, but not produced in South Carolina. Our state pays money to foreign countries for what she could raise at home. That the home consumption could not be met for some years, is true; but it is no less true, that in time she could not only plentifully supply her own wants in wines, cognac brandy and raw silk, but she would be enabled to export thousands of gallons of wine and cognac brandy, and thousands of pounds of silk to her sister states and to Europe. This would of course be adding to the capital of South Carolina by retaining the money she now sends tributary to foreign countries, for those articles of comfort and luxury, but in time also, by saving into her treasury much of the capital of her sister states and of this great continent. she would at once increase her wealth at home; and her rank and consideration abroad, and give new energy to her agricultural and commercial interests. All this would greatly enhance the value of her lands, which are now materially depreciated, inasmuch as it would create a new demand for land to produce those new and valuable articles.

There is another subject on which your memorialists will but respectfully observe, South Carolina has suffered material embarrassments in the mercantile portion of her community by the withdrawal of specie from the general circulation, by the reiterated demands of the Bank of the United States upon the local banks of this state for silver, in order to transmit to the General Government the amount of the revenue raised in her ports; she has long complained that the money so raised is expended in northern cities without any adequate return. This is not only true as regards the duties paid at the custom houses in this state, but is in part true as regards the duties paid at the custom houses in other states on articles re-shipped to this state. For instance, from October 1824 to October 1825, there were imported into Charleston direct, forty-four thousand seven hundred and thirty-two gallons (44,732,) of wine, and fifty-nine thousand two hundred and fifty (59,250,) gallons of brandy; the duty on both articles amounted to forty-six thousand and twelve (46,012,) dollars; presuming that there are half as much more of wines and brandies entered at the custom houses in New York, Baltimore, Savannah, &c., and re-shipped to this state, the duties on importation, being necessarily added to the price, the payment of those duties would devolve also upon the consumers here, and the citizens of this state would pay to the General Government sixty-nine thousand and eighteen (69,018) dollars a year for the mere privilege of importing what she could make at home. If then South Carolina would raise any of the articles which she now imports, she would not only save the duties on the direct or indirect importation, but she also would enable her own merchants to meet the foreign merchants in other parts of this Union, with the advantage of the whole duty in their favour.

To this effect your memorialists purpose introducing an industrious and well conducted free white body of labourers, who are habitually acquainted with the peculiar culture of the vine, the process of making fine wines, cognac brandy, and the raising of silk. This would, they humbly conceive, give a spur to the industry of the poorer classes of citizens in the upper and middle districts, as well as give them the power of earning an easy livelihood on weak, much worn lands. From those products being more valuable than cotton, and the vine requiring but a short time in winter to prune, and a few days in summer to harvest, express and distil, (leaving the remaining portions of the year free to cultivate any other articles,) their culture would much increase the value of negroes, inasmuch as the value of the field hand must be in proportion to the value of the products of his labour.

There are several kinds of grain and many fruits, as olives, &c. which are cultivated in Italy beside those, which are valuable both in their natural state and in the results of expression or decomposition. The introduction of those fruits, &c. particularly the olives, would be attempted by the same labourers; but your memorialists cannot be certain of the results, since the olives have only been tried in Charleston and on the coast; but of wine, brandy and silk they are certain, because they have been made in different parts of this state and North Carolina, and they feel assured also that the Great Author of nature would not have caused festoons of the wild grape to adorn many parts of this state, if He intended to declare—"this shall not be a wine country."

Your memorialists are aware that from some imperfect attempts which have been made, a doubt of the practicability of introducing the extensive and profitable cultivation of the vine in this state might arise in the minds of many; but when circumstances are exposed, the causes of failure will be evident, to wit: that the company of persons who, prior to the revolution, made the attempt in 1796, or thereabouts, did so, upon the French system of low culture, which is not as well adapted to a new country covered by woods, as the high culture of the Italians in Lombardy, &c.; and moreover, that the climate is much changed since then, by the clearing of the lands, rendering them warmer and drier, and more favourable to the culture of the vine. That the attempt *at introduction*, of private individuals, should fail, ought not to be attributed to the climate or soil, but to other sufficient causes, viz: 1st, to our labourers (negroes, for the most part,) being uninterested and ignorant of the peculiar culture of the vine; 2d, to the nature of our institutions, which to render permanent, it is wisely ordered that property here shall not be hereditary, but shall be liable to sale, division and dispersion amongst the several creditors or heirs. Thus, however successful the undertaking of a private individual like Mr. Naudrez, of Camden, may appear at first, its existence must, in all likelihood, terminate with his own. Private attempts *at introduction* will not succeed till a nursery of knowledge is established, from which the successor or heir to an estate could derive the information necessary to carry on the vineyard. The Agricultural Society of this state undertook to establish a vineyard about the year 1799, but its members were personally inexperienced in the peculiar culture of the vine, their labourers were hirelings who did but little, and finally their funds failed them. An experienced vine dresser would unhesitatingly declare it impossible to succeed in *introducing* the culture of this valuable plant by those means; but with labourers practically acquainted with its culture and interested in the result of their labour, together with a large efficient capital and good management, in any dry elevated situation between the 25th and 51st degrees of latitude, success would be undoubted.

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*Mr. M. should have stated that about a quarter part of this amount was re-exported.

That this is not a wild speculation on the part of your memorialists—that they have not projected so vast an undertaking without foreknowledge and much continued reflection, they beg leave to state, that one of them, Antonio Della Torre, is a native of Italy, where he was in the habit of daily seeing and aiding in every process in the making of wine and brandy in his father's vineyard, and those of his connexions; that they have been examining into the practicability of their places for two years, and deeming it absolutely necessary (to secure success,) to procure the practical vine dressers as well as the vines, they have had an agent in Italy for that purpose for more than fifteen months, who writes them word, that a number of persons, in families, of good characters, were ready to come out as soon as the means were afforded them and their promised farms were ready for their reception. But your memorialists find their capital insufficient. However liberal and free from objection their places are, for they have anxiously and jealously examined them, and however beneficial to this country they would prove, they cannot carry them into effect unless aided by the state. Italy, France, Germany and Hungary were not originally wine and oil countries, but the vine, the silk worm and the olive were introduced by enterprising individuals, encouraged by their governments, and those countries now abound in delicious wines, sweet oil and silk, and may not our republican institution be looked up to for sound policy, and confided in for the wisdom and liberality of its decrees, when that wise liberality is calculated to redound a thousand blessings to the people. They trust it is evident to your honourable house, that the introduction of the vine, the silk worm and the olive will yield a thousand blessings to the people of this state; and they think it is also evident, that the experienced vine dresser and maker of fine wines and brandy, the rearer of the silk worm and expresser of olive oil, ought to be brought over to insure those advantages, by forming a nursery of knowledge from whence practical information may be extended over the state; that those persons ought to be stockholders, having a deep interest in the products of their labour so as to excite them to make every exertion, and that they ought to be in sufficient numbers to meet the demands of the enterprise; that wherever their vineyards are located the lands in the vicinity would rise in value; and as their products advance the comforts and pleasures of life, in proportion as their village and vineyards beautify the up country, many of our citizens who now seek amusement abroad, expending thousands of dollars amongst the inhabitants of the north, to the impoverishment of the state, will in time find more pleasure, comforts, and amusing novelties, attend a tour through the upper country, in visiting the village, &c. of those farmers, and the many vineyards, silk and olive establishments of our present citizens who will adopt the culture and extend them over Pendleton, Greenville, Abbeville, York, &c. Thus, by your wise provision, you will allure your wandering children from foreign excursions, and entice them to expend those vast sums of money annually amongst their peculiar brethren of the upper and middle districts that the present expenditure of this state for foreign wines and brandies, to wit, thirty three thousand six hundred and thirty (33,630,) dollars for wines, and seventy five thousand five hundred and ninety two (75,592,) dollars for foreign brandies—and also, the sixty nine thousand and eighteen ($69,018,) dollars to the general government, as custom house duties on both articles, amounting in all to the large sum of one hundred and seventy eight thousand two hundred and forty dollars, would annually be preserved to the state, and circulated amongst the agriculturists of the upper and middle districts. As the balance of trade can only be preserved by the value of the exports equalling that of the imports, South Carolina would, by the cultivation of these articles, be enabled to preserve that balance in her own favour, and by the export of those rich articles of commerce, wine, silk, brandy, and perhaps olive oil, your constituents would become prosperous and happy, and under your auspicious banner would South Carolina ascend this proud eminence amongst her sister states.

As they trust they have fully shown how their individual enterprise would benefit that state which will extend the shield of patronage over its infant head, your memorialists now beg leave to explain the necessity of that patronage thus: The vines will not begin to bear under three years, and the crops are not abundant till after the fifth year; the mulberry trees must have age before they will yield leaves enough for the use of the silk house; the olive trees must acquire a certain age before they begin to bear fruit; and in short, although they will yield abundant benefits to the state, the labourers, and the projectors, in *time*, as the subsequent documents will prove—yet, during that lapse of time, (from three to five years,) little or no interest can be obtained from the amount invested. Your memorialists, therefore, find, that to insure the *efficient* introduction of those articles, so as to secure their permanence and profit to the state, would require a larger capital than they could command; and that unless aided by your honourable body, they would be unable to make the attempt without great risk of failure and ruin. But if your honourable house shall deem their views correct, of the ultimate prospect of cotton becoming, in five or six years, so common a staple over Egypt, the East Indies, South America, Mexico, the middle and southern states of this Union, the Floridas, and the vast territories bordering the Mississippi and Missouri rivers, so as to become valueless to the citizens of this state, as an article of profitable exportation, they trust that their effort to provide additional and most valuable staples in due time will not be considered as premature, and that forty thousand dollars will not be thought too much to loan to the advancement of so important an undertaking. Your memorialists, therefore, pray, that your honourable body will grant them a loan of forty thousand dollars on sufficient security for five years, without interest, and the after instalments to be so regulated as not to crush the establishment; and any other aid which you, in your wisdom, may deem necessary to advance the agricultural prosperity of the state, and to induce the industrious and inestimable vine-dressers of Europe to take shelter under your paternal government, and who in return will not only pay the money thus loaned, but will make your country rich in the production of the delicious wines of Italy, France, and Hungary; in cognac brandy, silk and olives, and from whom your present citizens will acquire every instruction in their peculiar culture and manufacture. And your memorialists will most respectfully pray, &c.

ANTONIO DELLA TORRE,
JAMES C. W. M'DONNALD.

ON THE IMPROVEMENT OF GRASS LAND BY WINTER FLOODING.

By Mr. Western, M. P.

The chief purpose of the pamphlet from which we make the following extracts, is to recommend the application of the winter floods to the purposes of irrigation. "Mere winter floods," says the author, "may at little or no expense, be rendered infinitely beneficial. The idea of using *winter floods only*, without the aid of springs, is the only approach to novelty in this letter; and probably that has not occurred to myself alone; though certainly it is not practised any where else, that I know of. —"It will suffice," he adds, "to advertise you (the owners and occupiers of land in Essex, to whom the letter is addressed) of what you are to expect;—a mere farmer's report of his own efforts at improvement in a branch of agriculture little understood, with some few brief practical remarks drawn from his own experience."

"The system I advise and practise," Mr. Western observes, "is, in the first place, studiously to drain off the springs from out of the earth by deep under drains (no open gripps,) and then lead them by various means, according to the form of the ground, and as far as the levels will permit, together with every drop of *flood* water that can be collected, on and over all pasture land; not allowing the water to hang, certainly; far from it: on the contrary, care must be taken that it shall be in constant motion, and have free passage to go off, the slower it moves perhaps the better, because it deposites more of the sediment it brings with it. This sediment is the finer and softer mould of the fields, from whence it comes; in this county, it comes loaded with richness from our fallow fields, and is more efficacious even than the dung cart, in giving permanent value, whilst vegetation is hastened, and a beautiful herbage is produced much earlier than in grounds not so treated.

"The means adopted to lead the water on and over lands, are not easy to describe. I must refer you to the various authors who have treated the science fully, and to whom I would wish you to have recourse; but the practical man will learn more in an hour, by seeing and examining the work that is done, than by weeks of study. Where the lands lay naturally sloping, ever so little catch work, as it is termed, is always easy; here the *springs* or *floods* are caught and turned, as the natural variations of level will admit. Flat meadows must be thrown into artificial inclined planes, like a *wide land*, or stetch of twelve or sixteen furrows, the water being led along the middle, which is the highest part, in a small channel, overflowing the lips of it regularly as it goes, and trickling down the inclined plane on each side into drains resembling the stetch furrows; and this, when there is a stream flowing abundantly, summer and winter, I shall call *irrigation* as distinguished from catching of springs and floods, where the ground is naturally formed into such inclined planes as admit of its being done. We have then *irrigation*, *catch work of springs* and *flood water* combined, *catch-work of springs alone*, and *catch-work of winter floods alone*; and here let me observe, that the catching of winter flood water only, may be accomplished very often, and almost always with great facility. I hardly know a farm in which some opportunity does not occur of rendering flood water available, and of its utility one experiment will suffice to satisfy the most incredulous. The quality of soil makes no difference, because all are benefited by the accession of fine mould, of which these floods are the carriers, and none are injured by FLOWING water.

Catch work consists simply in diverting the natural course of the water, and leading it in one *less* rapid. That which you choose for it must be, indeed, falling, but as near a perfect level as will suffice to keep the water on in constant gentle motion; then by putting a little stop (a spadeful of earth) in this new channel here and there, it will flow over its lips generally, and water gradually the space between it and its *natural* channel. To find this *new* channel, if the case is difficult, an experienced man with a spirit level must be employed. In common cases, to catch spring or flood water, it may be done by an expert husbandman, who is accustomed to drainage, and has an accurate eye. I have, in some instances, found it practicable to set in a ploughman with a pair of horses, directing him to fix his plough in the natural water course, and take his line in any direction that appears the nearest to the level where he stands, without making it an absolute and perfect level; he must work out his furrow, however circuitous his course may be, in such direction as that the water shall slowly follow him as he goes. His course will, indeed, often be very curved, according to the variations of the level of the ground; but this circumstance must not be regarded: he must follow this sole and simple rule, nor will any loss of ground or injury to the meadow follow. The bottom of this channel must be enlarged and finished with the spade, and will be coated with grass soon, and fed when the floods are gone, or the springs let off again. I can show an instance, of which there would be many, no doubt, where a meadow has thus been managed, and flood water effectually laid on, at the expense of a few shillings: the beneficial effects are *immediate* and accumulative, if I may so express myself; each successive year increasing the store of wealth thus annually brought. I have one channel thus formed not six weeks ago,[*] which, watering a piece of grass land, exhibits at this moment, in a most striking manner, the influence merely of our *last* floods; the herbage shooting forth so much more vigorously, thick, and beautiful, than in the part of the field not watered. I do not say, in poor sandy countries, the floods would be so *immediately* productive, nor, indeed, at any time so productive as here. This is the county of all others in which they must be most charged with value, from the extent and quality of our arable lands; accordingly, I say, we of all others should adopt, and would benefit by the practice.

In many parts of Europe, and for aught I know, in other quarters of the globe, this system of catching and directing flood waters (not *irrigation*) has long been practised. I have seen it in one country only, namely, in Switzerland, in descending the Jura Mountains, which divide France from Switzerland; the very first pasture you find on the descent, evinces the value placed upon the mountain floods, by the inhabitants of those districts; and accordingly every stream is sedulously directed and conducted over the pastures, in a most skilful manner. The very washing of the roads in hasty rains, is also attended to and applied to the same purpose. It may be said that the floods from the *mountains*, by their impetuosity bring down more wealth; but in countries like this, the want of violence of descent is compensated by superiority of the soil, whence the floods, no doubt with less rapidity, proceed; and the looseness too of that soil which is under the plough, and so much the more easily hurried away with the flood, contributes to give a greater portion of its value to the streams as they descend. In Devonshire, Somersetshire, parts of Herefordshire, and parts of Wales, though *partially* in those places, the springs rising on the hills, and the floods from them, are directed over their sides in this manner. In mountainous and hilly districts, the sources from whence the waters flow being very elevated, a much larger tract of country may be covered by them; in Essex the quantity must be small; but that is no reason for not adopting the practice to the utmost extent possible: on the contrary, we should be more sedulous in availing ourselves of those opportunities which do occur."

Mr. Western having properly pointed out the importance of drainage on pasture lands, strongly recommends the use of the mole-plough.

"I have used it," he says, "with the greatest success, making the courses or drains only half a rod asunder, with good leading ditches dug by spade, and filled up with wood and straw; or if there is a considerable fall in the ground, and no chance of the water hanging any where, I leave the mole-plough courses to empty themselves into the valley. Previous to using the mole-plough, I plough back a furrow with a common plough, then work a mole-plough in the furrow, turn back the sward again and roll it down, and the work is done and nothing seen. I put eight or ten horses to the plough, according to the depth I wish to go, and at *half a rod* asunder, each course or drain, I can go well over ten or twelve acres a day. If the soil is very tenacious and will not draw far, the plough may go the fleeter. The number of horses should be fully sufficient for the work, that they may not pull by jerks and snatches, which will render the drain less perfect. Having accomplished this work, I fill up *all* the *gripps* of every kind, so that the turf is unbroken in every part; and you will hardly conceive the great improvement in appearance and comfort, of thus removing such a deformity in the surface-ground of our parks, paddocks, or other pastures. These mole-plough drains will stand fourteen or sixteen years; and the system is more effectual than spade-draining, inasmuch as it is easy to make so many more than we can by the expensive work of the spade; and so much more ground is gone over in so short a space of time. There are cases in which the main drains must be made with drain-tiles or gun bricks, or even an arched drain for some distance may be necessary. There are doubtless some lands very light, and some excessively heavy, in which the mole-plough will not act. In the former case, it is rarely wanted; but a vein of sand is not always an impediment, as the drains so closely drawn together assist each other; where one is blown, the water seeks and finds a passage in that adjoining. Excessive heavy strong land sometimes will not do; but if the sward is first ploughed back, as before described, and the ditches are fleet and frequent, they will be found to answer in cases hitherto thought impracticable. The mole-plough is now used with equal success upon *arable lands*. In so applying it, I have only followed the example of some intelligent farmers in the neighbourhood; but from pretty extensive experience now myself, I can fully confirm the account they gave me of its *infinite* utility, and most anxiously recommend its universal adoption wherever the draining off the top water is necessary."

[*Farmers' Magazine, Edinburgh.*

WOOL.

Dear Sir, *Steubenville, Dec.* 23, 1825.

I have enclosed you six samples of merino wool, from sheep bred on my own farm, which I think you will find not inferior to your Saxon samples. My sheep are descendants of Spanish ewes and Saxon bucks. For wool of the quality I have sent you, I get 80 cents in the dirt. In justice, I ought to mention, that my flock originated from 100 ewes and one buck purchased four or five years since, from W. R. Dickinson, Esq. to whom the country is more indebted than to all other men in it, for the present standing of merino sheep; for when they were at the lowest ebb, perfectly degraded, and suffered to be adulterated and destroyed in every manner, he meted to them the strictest attention, and retained them entirely pure, and for many years has supplied all the flocks of the west with full bred bucks.

I think I have discovered the means of entirely preserving the peach tree from destruction by the worm at the root. Two years last spring, I took up several trees, which I had budded, for the purpose of transplanting them into my yard. On raising them, I discovered they were very much injured by worms. With my knife I destroyed all I could reach, and then washed the parts injured with a strong solution of corrosive sublimate before planting. I then put a shovel full of live ashes to them three times a year, spring, summer and autumn, first removing the soil two inches deep immediately around the tree; I also gave directions to the people in the kitchen to pour all the soap suds they made on wash-days, and all the greasy dish-water hot to the roots of the trees. Three of the trees that were nigh to the kitchen door, and *of course* received plentifully of the hot ablutions, grew astonishingly, and are perfectly smooth and free from the worm; the others, just as they are removed from the kitchen door, are just in that proportion infected—though none of them badly. I consider live ashes a good remedy, but with the addition of *hot* soap suds and dish-water, a certain one—the hotter the better. I have poured boiling ley, as strong as would make soap, to peach trees with great advantage.

Yours, with esteem,
JOHN McDOWELL.

J. S. Skinner, Esq.

[In the above letter we received six samples of extremely fine wool. They have been divided and sent to two eminent manufacturers of superfine cloth, to wit: James Sheppard, Esq. of Northampton, Mass. and Peter Schenk, Esq. of the state of New York, with as many samples of Saxon wool from the sheep of that country, sold last summer near Boston. But to these gentlemen we have given no clue to know the one from the other, that there may be no possibility even of suspecting partiality. We shall publish the result when received, and thereby shew whether any necessity exists for sending to other countries for fine woolled sheep, or rather whether there be not sheep in our own, equal to Saxony sheep, though they may not sell so high; our own impression is, from the best information we can get, that Mr. Dickinson, of Steubenville, can select from his flock, individual rams and ewes, in as great number and with fleeces as fine as are to be found in any flock of like number in any country. But how has this been accomplished? Not by purchasing without examination and rearing without care! No, he has given to the subject the unremitting personal attention it deserved; which, aided by the best judgment, has conferred on his flock a well merited celebrity, and left the western country without necessity for further recourse to the Atlantic for rams of fine fleeces. We have understood that Mr. Dickinson's best rams command fifty dollars, and have no doubt they are well worth it to those who would judiciously employ a portion of their time and resources in sheep husbandry. This subject is progressing in importance with the progress of manufactures, and our readers who feel an interest in it shall not be left uninformed of all that can be gleaned from the best writers and the *experience of practical men* in regard to it.]

ON THE IMPORTANCE OF NEAT CATTLE.

By John Hare Powel, Esq.

Extracted from the Memoirs of the Penn. Agricultural Society.

(*From the Agricultural Almanack for the year* 1826, *patronized by the Philadelphia Society for promoting Agriculture.*)

I have the honour to present various selections from European works, to establish certain positions, which have been assumed in some of my late communications. In corroboration of the facts, which have been alleged, I produce for publication, part of a letter from Major Rudd, a gentleman of high standing in Durham, distinguished alike by his zeal and success, as an improver of neat cattle and sheep.

I am aware that it has been hinted, that too much discussion had arisen on the properties of farm stock; but I may object, that no subject is more interesting, and none more important to the husbandmen and landholders of the eastern, middle and western states, than that which indirectly involves the application of three-fourths of the product of their labours, and of their lands. I apprehend, that not more than one third of *their* cultivated soil, is annually subjected to the plough; that of its produce, except small quantities of hemp and flax, the farinaceous parts of wheat, and a portion of rye, buckwheat, and Indian corn for whiskey and bread, nearly the whole is employed for the nourishment of neat cattle, horses, sheep and swine.[*] Thus, without regarding the immense forests, whence we derive our principal supplies of beef and mutton, and I should hope, ere long, we shall receive the greater part of our wool—I think it is evident, that to our population at least, it is worth some effort to ascertain, whether experience has established, in the country where they are best known, and by the standard which every man can best comprehend, the superiority of one race of neat cattle over every other, either original or *improved*.

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[*] Written in May.

If it shall appear, that by the multiplication of this race, "the produce of beef, upon a given extent of land, would be nearly doubled"—the quantity of butter increased—the facility of procuring powerful oxen for draught, not lessened—and withal, that the amount of offal would be diminished—the weight of flesh and of fat would be carried upon the proper parts, I trust it will not be contended, that the discussion is futile, or the premium absurd, which shall have brought this race more generally into view.

No man will deny the importance of the animal, whose milk affords butter, cheese, and various combinations for his table—whose hide gives leather for machinery, harness, and his shoes—whose hair supports the plaister upon his walls—whose horn, bone and blood are employed in manufactories, or converted into articles constantly in use—whose tallow and fat are consumed in candles and soap, necessary to his comfort and health—whose feets afford oil, valuable in many pursuits—whose stomach even, constitutes an agreeable repast—whose tail is converted into a couch for his indulgence or repose—and whose patient offspring, after having enabled him to reap the harvest from his fields, yields the most wholesome and nutritious food for his frame—and finally by offal enriches the soil.

It appears by Bailey's Survey of Dorham, that at Colling's sale in 1810, seventeen cows were sold for *l*2802 9s sterling—eleven bulls for *l*2361; twenty-eight animals thus produced $22,948 67. That Major Rudd paid 410 guineas for Lady of 9 years—for Lily 100 guineas—for Peeress 170 guineas—for Petrarch 375 guineas, that Messrs Wetherill & Co. paid for Comet of 6 years, 1000 guineas. Mr. Champion and Col Mellish have since paid 450 guineas, for the services of Charles, during 2 years. A regular record is kept, in the Herd Book, of the pedigrees of the animals of pure blood. Although 140 breeders, 180 bulls, and nearly 8000 heifers and cows are enumerated in this volume, it will be seen by Major Rudd's letter, and by the prices which I have paid, that their cost continues to be as high as it was ten years since.

If it were regulated by the caprice of men of fortune, it might be alleged, that fashion gave to them a fictitious value; but as the practical farmers of England sanction it by their purchases, and support it by their demands, it must be inferred, that after a trial of fourteen years, the animals possess the merit which has been claimed. To show the interest which they have excited, not only in England but in this country, I could mention the names of some of the most distinguished gentlemen of Massachusetts, one particularly of Worcester county, who, notwithstanding the various and important duties of his high public station, manifests, in his agricultural pursuits, the most extensive scientific acquirements, and in *their results*, New England matter-of-fact skill:[*]

He observes—"Next to the merino sheep, I consider the introduction of the short-horns, *in the blood of Denton*, as the richest acquisition to the country which agriculture has received. For the dairy and the stall I speak with the utmost confidence of their preeminence. From my three years old heifers I have calves of the most promising appearance, and greatly excelling any I have before seen. One of the heifers gives from 16 to 20 quarts of the richest milk, by the day, since calving; the other a little less, from the circumstance of having been in milk continually for more than a year; but her milk is in no degree inferior in quality. The last season she gave eleven quarts at a milking with grass only. A heifer of three years, with her second calf, has not been dry since she dropped her first, having given four quarts on the morning of her second calving."

I have, in my importations and purchases, sought the stock of those breeders, who have regarded *the milking properties* not less than the propensity to become fat.

Mr. Curwen, who, as the able promoter of the agricultoral interest both in Parliament and his county, is generally known, evinces great anxiety for the dissemination of this breed; in his excellent report to the Workington Agricultural Society, after reciting the origin of the different families of short-horns upon his estates, mentions those, which "*in uniting the two essential qualities of milking and fattening* are highly valuable;" and adds, "two heifers and a bull were this spring forwarded to Thomas Law, Esq., at Washington; from friendship and connexion, as well as the desire to support the credit of my farming, the very best specimens were selected. The steers, which have been bred and slaughtered, have been equal *in quality of beef to any thing I could have expected or desired.* At two and a half years old they weighed from 80 to 85 stones of 14 lbs. each, equal to 1120 or 1190 lbs." although reared, in the usual mode, upon turnips, chaff and straw. In mentioning the draught oxen on his farms, Mr. Curwen observes, "those which are now at the Schoose were produced there, and are of the short horn breed. William Eve, who has long been with me, and is accustomed to the working of both *Devonshire* and *Herefordshire* cattle, is of opinion, that the short horned are quite *as quick as the former*, and *as powerful as the latter.*"

I have, for some time, bred from the bull and an heifer, begotten in England by General, Mr Curwen's best male, upon one of the heifers sent to Mr Law.

These animals, as well as my importations from Mr. Wetherill, and some of those bred by Mr. Champion, have every claim to excellence which high pedigree can establish. Comet, Peeress and Lady, sold to Major Rudd and Mr Wetherill, were the grandsire and grandams of some; Charles, which had been hired during two years for 450 guineas, was the great grandsire of another.

Mr. Wetherill states, that the animals which he had sent to Mr. Williams and myself, were of his "*very best blood*"—those from Mr. Champion have his highest commendation, and are fitted, he declares, for "milking and fattening." It must be observed that unless the pedigree be traced on *both sides*, the animal cannot be admitted as one of pure blood. Some of the bulls and cows which have been brought on speculation from England, are not worth half their cost. A flourishing account is given of Comet, or some celebrated bull, named as the grandsire, the sire, if from a native cow, would, nevertheless, be not more, in technical language, than an half bred, his offspring from a native cow would be a quarter bred calf, whose progeny from a native cow, would possess but one-eighth of improved short-horn blood.

I am, sir, your obed't serv't,

JOHN HARE POWEL.

JONATHAN ROBERTS, ESQ.

Presd't of the Penn Agricul. Society.

COB-MEAL.

DEAR SIR, Springdale, Dec. 23, 1825.

From communications in the Farmer, I discover that the republication by you, the 25th ultimo, of a letter from the Rev. H. C. Perley, of New Rowley, Mass., to the editor of the New England Farmer, has brought to exposition a diversity of opinion upon a very important and interesting question with farmers; I mean the advantage of *cob-meal* in keeping and fattening cattle.

Possessing a little experience in this matter, I conceive it proper to throw my mite into the scale, and hope it may lead others to similar experiments, and a like communication of the result. If, as I conceive, the use of cob-meal forms an important item in the economy of fattening cattle, it is time the attention of farmers was directed to it. Having attached to a mill in my possession a machine for breaking plaster, cobs, &c. I was led to various experiments, with a view of ascertaining, if practicable, the relative value of the cob with the corn it produces. I was well aware of the difficulty of making *any experiment*, connected with our profession, that would not still leave an opening for scepticism; and therefore determined to vary and repeat, until at least my own mind was perfectly satisfied. Knowing that distillation generally afforded the surest means of ascertaining that *any matter* contains nutritive, or saccharine properties, I had ground, and taken to my distillery, several bushels of cobs. They were scalded (as we do the meal of the grain,) with boiling water, then mingled with cold water and yeast. From the rapid fermentation which soon succeeded, I was fully satisfied that there was present, saccharine matter. The next morning the vinous fermentation ceased, and the acetous commenced, which confirmed and fixed all my impressions. The valuable properties being so quickly destroyed by the second fermentation, I thought it impolitic to risk the burning of my stills, and the beer was thrown out.

The only question now remaining to be solved in my mind was, whether the digestive organs of animals were sufficiently strong to extract from the cob its nutritive properties. To ascertain this, I commenced feeding my hogs with the meal produced by grinding the cob and corn together, instead of the corn exclusively, and soon discovered that the cob destroyed with them the good effects of the meal; that their stomachs were not sufficiently strong to war with the wooddy parts of the cob; that they sickened and pined under it. I next made the experiment with my horses, and was soon driven to the same deduction. I discovered that its distending and nutrition was counteracted by its indigestible properties. By this time my opinion began to vacillate; stubborn facts presented themselves to my mind, and my favourite theory stood before me "like the baseless fabric of a vision." But there was one more experiment to be made, and upon that depended much; it was the average of my hopes; it was either to knock in the head altogether my speculations, or to convince me of the utility of feeding the cob to our horned cattle at least. I was in the habit of giving, at the time the experiment was made, to some beef cattle then on hand, about five bushels of corn meal per day; with this quantity I effected my object of keeping them in the state they were received from the grass. They were not fattening at the time. I changed from five bushels *fine meal* per day, to five bushels of *cob and grain meal* There was not the slightest perceptible difference in the keep of the cattle, after continuing this some time. I then commenced giving them five bushels *fine meal* again, mingled with the *cob, yielded by that quantity.* My cattle immediately commenced fattening, and gave me assurances in their slick hair, sprightly eyes, and frolicking disposition, that with them there was *perfect digestion,* and that they were in a healthy and thriving state. It is worthy of remark and particular notice, that while I fed with *cob and corn meal,* I never discovered one of them cloyed for a moment. They ate with the greatest avidity, at all times, what was given them.

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[*] "In the best districts there will generally be not less than one half of the land employed in raising roots and green crops for live stock, and not more than two-thirds of the inferior soils are always under these crops and in pasturage. Probably not more than two-fifths of even the arable land, or ten acres in a hundred of the whole surface, produce crops immediately applicable to the food of man. The remaining ninety acres, after a small deduction for fresh water lakes, are appropriated to the breeding, rearing, and fattening of live stock." (*Sinclair's General Report of the agricultural state and political circumstances of Scotland, vol. 3, p. 1.*)

[*] "*Boston, Oct 20, 1825.*—At the Worcester Cattle show Governor Lincoln offered for exhibition, three half Denton cows, one of them particularly noticed as an extraordinary animal of her kind. She has often given from 24 to 27 quarts of milk per day, of excellent quality, yielding a large proportion of cream. The least quantity of milk given by her in one day during the summer drought, on grass feed only, was 13 quarts."

DENTON is an imported bull, of the improved Durham short-horned breed.

These experiments, thus carefully made, and their effects investigated by myself, have forced upon me this conclusion: that *cob and corn meal is too heating and indigestible for hogs or horses—but is worthy of the highest consideration as a food for horned cattle.*

Very respectfully, yours,

WM. M. BARTON.

John S. Skinner, Esq.

COTTON CROP.

Mr. Skinner, *South Carolina, 20th Dec.,* 1825.

On the 1st September I addressed you on the subject of the cotton crop. The wretched system of speculation has induced the planters to grow such a quantity, that it is now only worth from 12½ to 15, and corn is 87½ to 100 cents.

The New York accounts confirm the idea of the New York American of the 8th August, that 560,000 bales would be the produce of the United States for 1824-5. It turns out that 569,248 bales was the amount of the "crop." The American said in August there were 560,000 bales "*gone and to go.*" This implies that the amount was to be "exported." But this, I presume, and really hope, will be erroneous; for, with the fact of the extra supply in Great Britain, the good people are now *speculating* on a spring similar to the last as to prices.

However, it is as well for prudent farmers to look to the past as a guide to the future.

The supply of 1824-5, was . . *bales*			569,248
From New Orleans and the Gulf ports, ...		256,000	
Increase at 20 per cent. . . .		51,200	
		307,200	
The old States, .	313,248		
Increase 40 per ct.	128,280—	441,528—	748,728
Home consumption, ...			100,000
To be exported, ...			648,728

There is no doubt the supply at Liverpool on the 1st proximo, will be 500,000; so that Europe will have in hand and to go, little short of 1,200,000. The best accounts from Great Britain indicate a dread of the effects of the spirit of speculation, if it should arise; and, it is really to be hoped that the fear is unfounded.

In addition to this supply, there is an increasing prospect of the pacification of Greece. This will leave the shores of the Mediterranean free from interruption, and give employment to the cheapest tonnage in the world.

The last accounts also gave an intimation of a severe winter in Europe. It has been several years since this happened.

I am, &c. Amphicon.

FROM THE NEW ENGLAND FARMER.

MERINO SHEEP.

Susquehanna county, (Pa.) Dec. 24, 1825.

Dear Sir—Being desirous of consulting the experience of others respecting the raising of merino sheep, I applied last spring to several of the best informed breeders in this state, for information on the subject, and, as they may be interesting to some of your readers, I send you the questions and answers. R. H. ROSE.

QUESTIONS.

1. What *per centage* will die annually?
2. How many lambs can you raise per hundred ewes?
3. What is the average weight of your fleeces?
4. What is the price per pound?
5. What is the average length of life of merinoes?

ANSWERS.

A.

1. Not to exceed five per cent.
2. Ninety per hundred: but doubtful. Much depending on the season of lambing, and the care of the shepherd.
3. The fleeces of my ewes averaged five pounds; of my rams higher. My flock has averaged six pounds. I have sheared from a ram thirteen pounds.
4. I sold all mine for thirty-five cents.
5. From fifteen to twenty years.

B.

1. About five in the hundred.
2. About ninety lambs per hundred ewes.
3. Average weight about four and a half pounds in the dirt.
4. Forty cents per pound unwashed.
5. About twelve years.

C.

1. Five per cent.
2. Ninety per hundred.
3. Ewes five pounds, if well kept; wethers six; rams seven.
4. Forty cents per pound in the dirt.
5. I have some that were imported thirteen years ago.

D.

1. Perhaps five per cent; but scarcely that.
2. Ninety to the hundred.
3. Whole flock averaged five pounds.
4. Thirty-seven and an half cents per pound.
5. Cannot state their age.

E.

1. Five per cent.
2. Ninety to the hundred—Perfectly safe to calculate on that.
3 Five pounds.
4 Forty cents.
5. Twelve years.

HORTICULTURE.

MR. ROWAN'S NONDESCRIPT ROSE.

J. S. Skinner, Esq. *January* 2, 1825.

One of the many persons favoured by Mr. Rowan with presents of his valuable rose, would be glad to learn, what month is (or may be expected) the best to cut off and set for a permanent hedge, from the product of Mr. Rowan's present of sets.

They were received by the writer in Jan. 1821, immediately planted in ground that has been well covered with leaves for that purpose, and the leaves returned over the plants About thirty only took *root;* these were sheltered the following winter, by placing corn stalks underneath and straw thrown amongst and over them. This treatment was continued each succeeding winter, with straw and leaves, lessening in quantity, until the last, when no shelter was given them. Many shoots were killed by the frost, but the number of deaths diminished each following winter. At present (2d Jan.) the leaves are much changed in colour. There appears to be shoots enough to set out perhaps 300 yards on Mr. Rowan's plan.

So beautiful and useful a fence as these roses must form, well deserves our best care; it cannot fail of answering every wish. The writer flatters himself those he speaks of are considerably habituated to their new climate.

Mr. Rowan plants in January. That season may do best so far south; but a situation about a hundred miles east of the centre of Virginia, where the writer lives, may require a different one; to ascertain which, he flatters himself the experience and opinion of others will be cheerfully communicated through a channel as valuable as extensive, the "American Farmer," and which cannot fail of being for the general good.

It is believed, none of the plants that took root has perished. Many shoots appeared to be killed by the severity of each winter, but regained health and vigour the following spring.

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

(Continued from p. 327.)

Chapter III.

ON GENERAL CONDUCT.

Earnestly endeavour to obtain among your acquaintance the character of a *good husband;* and abhor that sort of *would-be* wit, which I have sometimes seen practised among men of the world—a kind of coarse jesting on the bondage of the *married* state, and a laugh at the shackles which a *wife* imposes. On the contrary, be it your pride to exhibit to the world that sight on which the wise man passes such an encomium: "Beautiful before God and men are a man and his wife that agree together." (*Eccles.* xxv. 1.)

Make it an established rule to consult your wife on all occasions. *Your* interest is *hers:* and undertake *no* plan contrary to her advice and approbation Independent of better motives, what a responsibility does it free you from! for, if the affair turn out ill, you are spared reproaches both from her and from your own feelings. But the fact is, she who ought to have most influence on her husband's mind, is often precisely the person who has least: and a man will frequently take the advice of a stranger who cares not for him nor his interest, in preference to the cordial and sensible opinion of his wife. A due consideration of the domestic evils such a line of conduct is calculated to produce, might, one would think, of itself be sufficient to prevent its adoption; but, independent of these, policy should influence you; for there is in woman an intuitive quickness, a sagacity, a penetration, and a foresight into the probable consequences of an event, that makes her peculiarly calculated to give her opinion and advice. "If I was making up a plan of consequence," said the great Lord Bolingbroke, "I should like first to consult with a sensible woman."

Have you any male acquaintance whom, on reasonable grounds, your wife wishes you to resign? Why should you hesitate? Of what consequence can be the civilities, or even the friendship, of any one, compared with the wishes of her with whom you have to spend your life—whose comfort you have sworn to attend to; and who has a right to demand, not only such a trifling compliance, but great sacrifices, if necessary?

Never witness a tear from your wife with apathy or indifference. Words, looks, actions—all may be artificial; but a *tear* is unequivocal; it comes direct from the *heart*, and speaks at once the language of truth, nature and sincerity! Be assured, when you see a tear on her cheek, her heart is touched; and do not, I again repeat it, do not behold it with coldness or insensibility!

It is very unnecessary to say that contradiction is to be avoided at all times: but when in the presence of others, be most particularly watchful. A look, or word, that perhaps, in *reality*, conveys no angry meaning, may at once lead people to think that their presence alone restrains the eruption of a discord, which probably has no existence whatsoever.

Some men, who are married to women of inferior fortune or connexion, will frequently have the meanness to upbraid them with the disparity. My good sir, allow me to ask what was your motive in marrying? Was it to oblige or please *your wife*? No, truly; it was to oblige and please *yourself*, your own dear self. Had she refused to marry you, you would have been (in lover's phrase,) a very miserable man. Did you never tell her so? Therefore, really, instead of upbraiding her, you should be very grateful to her for rescuing you from such an unhappy fate.

It is particolarly painful to a woman, whenever her husband is unkind enough to say a lessening or harsh word of any member of her family: invectives against herself are not half so wounding.

Should illness, or suffering of any kind, assail your wife, your tenderness and attention are then peculiarly called for; and if she be a woman of sensibility, believe me, a look of love, a word of pity or sympathy, will, at times, have a better effect than all the prescriptions of her physicians.

Perhaps some calamity, peculiarly her own, may befall her. She may weep over the death of some dear relative or friend; or her spirits and feelings may be affected by various circumstances. Remember that your sympathy, tenderness and attention, on such occasions, are particularly required.

A man would not, on any account, take up a whip, or a stick, and beat his wife; but he will, without remorse, use to her language which strikes much deeper to her heart than the lash of any whip he could make use of. "He would not, for the world," says an ingenious writer, "cut her with a *knife*, but he will, without the least hesitation, cut her with his *tongue*." I have known some unfeeling husbands, who have treated their luckless wives with unvaried and unremitting unkindness, till perhaps the arrival of their last illness, and who then became all assiduity and attention. But when that period approaches, their remorse, like the remorse of a murderer, is felt too late: the die is cast, and kindness or unkindness can be of little consequence to the poor victim, who only waits to have her eyes closed in the long sleep of death!

Perhaps your wife may be destitute of youth and beauty, or other superficial attractions which distinguish many of her sex: should this be the case, remember many a plain face conceals a heart of exquisite sensibility and merit; and her consciousness of the defect makes her peculiarly awake to the slightest attention or inattention from you: and just for a moment reflect—

"What is the blooming tincture of the skin,
To peace of mind and harmony within?
What the bright sparkling of the finest eye,
To the soft soothing of a calm reply?
Can loveliness of form, or look, or air,
With loveliness of words or deeds compare?
No: those at first the unwary heart may gain;
But these, these only, can the heart retain."

Your wife, though a gentle, amiable creature, may be deficient in mental endowments, and destitute of fancy or sentiment; and you, perhaps a man of taste and talents, are inclined to think lightly of her. This is unjust, unkind, and unwise. It is not, believe me, the woman most gifted by nature, or most stored with literary knowledge, who always makes the most comfortable wife; by no means: *your* gentle, amiable helpmate may contribute much more to your happiness, more to the regularity, economy, and discipline of your house, and may make your children a much better mother, than many a brilliant dame who could trace with Moore, Scott and Byron, every line on the map of taste and sentiment, and descant on the merits and demerits of poetry, as if she had just arrived fresh from the neighbourhood of Parnassus.

Should your wife be a woman of sense, worth, and cultivation; yet not very expert at cutting out a shirt, or making paste, pies and puddings, (though I would not by any means undervalue this necessary part of female knowledge, or tolerate ignorance in my sex respecting them,) yet pray my good sir, do not, on this account *only*, show discontent and ill-humour towards her. If she is qualified to be your bosom friend—to advise, to comfort and to sooth you; if she can instruct your children, enliven your fireside by her conversation, and receive and entertain your friends in a manner which pleases and gratifies you, be satisfied: we cannot expect to meet in a wife, or indeed in any one, exactly all we could wish. "I can easily," says a sensible friend of mine, "hire a woman to make my shirts and dress my dinner, but I cannot so readily procure a *friend* and *companion* for myself, and a preceptress for my children." The remark was called forth by his mentioning that he had heard a gentleman the day before, finding fault with his wife, an amiable, sensible, well-informed woman, because she was not clever at pies, puddings, and needlework! On the other hand, should she be sensible, affectionate, amiable, domestic, yet prevented by circumstances in early life from obtaining much knowledge of books, or mental cultivation, do not therefore think lightly of her; still remember she is your companion, the friend in whom you may confide at all times, and from whom you may obtain counsel and comfort.

Chapter IV.

ON CONSTANCY AND FIDELITY.

The manner and conduct which in a *bachelor* was perhaps appropriate and pleasing, is in a *married man* unbecoming and reprehensible: and he who, among a party of females, as a young man, was admired for his graceful gaiety, will, most probably, be set down by the wise as a very flirting, careless husband, if he appears to prefer the company of every trifling, foolish girl, to the society of his wife. And be assured, however good sense and pride may conceal her feelings, this levity of manners never fails to give her pain: and a poor return, indeed, is the smile of a silly flirt, for calling forth any unpleasant sensations in the breast of a sensible and amiable woman.

When in the presence of others, let her laudable pride be indulged, by your showing you think her an object of importance and preference. The most trivial word, or act, of attention and love from you gratifies her feelings: and a man never appears to more advantage, than by proving to the world his affection and preference for his wife. I knew a gentleman, (though he had been married for years,) who would always on going out, perhaps for only a day, step up to his wife, and affectionately kiss her; nor was there a person present at the moment who did not think more highly of him. In truth, there is scarcely a character which the world seems to value more than a good and tender husband.

I do not think that wives in general (though quite divested in other respects of envy or jealousy,) feel any very *over-boiling* pleasure at hearing their husbands run on in enthusiastic encomiums on other women. I knew a gentleman who was constantly in the habit of saying, "O dear, such a charming woman!—such beautiful eyes!—such a fine-turned shape!—such elegant manners!" &c. And I have at the same moment glanced at his wife, and observed a degree of awkwardness on her countenance, struggling with an effort to look pleased. And yet, had any one but her husband been the panegyrist, she would have listened most probably with pleasure, and heartily concurred in the encomium. You call this jealousy! No: in truth, I call it a *natural* feeling, which can be better felt than described.

Wheo I quote a few words from the Bible, on a certain subject, is it possible any further comment can be necessary? "A man that breaketh wedlock, saying thus in his heart, Who seeth me? I am compassed about with darkness, the walls cover me, and nobody seeth me; what need I to fear? the most High will not remember my sins; such a man only feareth the eyes of men, and knoweth not that the eyes of the Lord are ten thousand times brighter than the sun, beholding all the ways of men, and considering the most secret parts." (*Eccles.* xxiii. 18, 19.) And again, "The Lord hath been witness between thee and the wife of thy youth, against whom thou hast dealt treacherously: yet is she thy companion, and the wife of thy covenant. And did not he make one? Therefore take heed to your spirit, and let none deal treacherously against the wife of his youth." (*Mal.* ii. 14, 15.) Proud lords of the creation, let me entreat your attention to the above, and also to the following verses: "Know ye not that the unrighteous shall not inherit the kingdom of God? Be not deceived: neither fornicators, nor idolaters, nor adulterers, nor effeminate, nor abusers of themselves with mankind, nor thieves, nor covetous, nor drunkards, nor revilers, nor extortioners, shall inherit the kingdom of God." (1 *Cor.* vi. 9, 10;) "But the fearful, and unbelieving, and the abominable, and murderers, and whoremongers, and sorcerers, and idolators, and all liars, shall have their part in the lake which burneth with fire and brimstone: which is the second death." (*Rev.* xxi. 8.) "For this ye know, that no whoremonger, nor unclean person, nor covetous man, who is an idolater, hath any inheritance in the kingdom of Christ and of God." (*Eph.* v. 5.) "Now the works of the flesh are manifest, which are these: Adultery, fornication, uncleanness, lasciviousness, idolatry, witchcraft, hatred, variance, emulations, wrath, strife, seditions, heresies, envyings, murders, drunkenness, revellings, and such like: of the which I tell you before, as I have also told you in time past, that they which do such things shall not inherit the kingdom of God." (*Gal.* v. 19-21.) "Whoso committeth adultery with a woman lacketh understanding: he that doeth it destroyeth his own soul." (*Prov.* vi. 32.) Surely, if these solemn denunciations from the word of God fail to have an effect, I cannot suppose that any language from *my* feeble pen can be successful! Certainly not. Go on then, thou unhallowed man! go on, thou forsaken of God! Lost to feeling, lost to virtue, lost to heaven, go on in thy vile pursuits, and when the Almighty tells you, the adulterer shall not inherit his kingdom, mock at the threat, and for the sake of this horrible crime, welcome hell! welcome flames! welcome devils!

(To be continued under the heads of Domestic Habits—Absence—Expenditure—Increase of Family—and Conclusion.)

SPORTING OLIO.

SPORTING ANECDOTES,

Selected from the last English papers received at the office of the American Farmer.

[Mem.—In the field with dog and gun we could give instances of extraordinary success in our own country, if we could only prevail on gentlemen to communicate those anecdotes which serve to variagate the fare that we have to serve up weekly for our subscribers, and to excite emulation for amusements that recreate the mind and strengthen the body.]

SHOOTING MATCH.

The shooting match at Holkham, between T. W. Coke, jun. Esq., M P., and Captain Ross, on the second day took an unexpected turn. Mr. W. Coke, in conformity with the agreement, used dogs only as beaters, and he picked up the whole of his game. He bagged 36 brace of birds. Captain Ross had men to mark, to beat for, and to pick up his game He bagged 58 brace of birds. In consequence of this entire deviation from the articles of agreement, and of its having been ascertained that on the first day's shooting, although Mr. W. Coke walked up to all his shot birds, his attendants had inadvertently picked some of them up, contrary to the strict letter of the agreement, on explanation an amicable arrangement took place between the parties, and it was mutually agreed to declare the bet null and void. It was acknowledged that Captain Ross is decidedly the best shot, but that in this circumstance he must have lost his match if the strict letter of the agreement had been abided by. The Captain is not much acquainted with the method of hunting pointers and beating for game; his dogs were much inferior, and he is not equal to undergo so much fatigue as Mr William Coke The Captain's style of shooting was much admired by the spectators of this interesting match. Number of birds killed each day:—

1st day—Mr. Coke	54 brace—Capt. Ross	40 brace.
2d day	36	58
Total	90	98

Prince Leopold has been staying at Holkham, in addition to the distinguished guests last week enumerated as the visiters of Mr. Coke.

WINDSOR ROYAL HUNT.

On Monday morning *Lord* Maryborough, Master of the King's *Stag Hounds*, and a numerous field of sportsmen assembled at Ascot Heath, where a fine deer, from Windsor Great Park, was turned out for the day's diversion. The deer started in the direction of Sunning Hill Bogs, by Kingsbeach Hill, across the Heath, towards Virginia Water, taking to the right across the country with great speed, then to the left, when he was taken after a smart chase of upwards of two hours and a half.

TROTTING.

Matchem and *Diadem* trotted their match, which should do most in two hours over three miles of road and turf adjoining the Royston inclosures, on Wednesday morning for a stake of 400 sov., and it was done as follows, betting 5 to 4 on Diadem, a report having gone forth the new favourite was amiss:—

Matchem.	M.	S.	*Diadem.*	M.	S.
1st three miles	12	6	1st three miles	12	4
2d ditto	12	14	2d ditto	12	18
3d ditto	12	20	3d ditto	12	31
4th ditto	13	3	4th ditto	14	00
	49	43		50	53

Diadem broke into a trot in the thirteenth mile when a long way behind, and the race was given up. A Somersetshire man, of the name Wilkie, was matched on the ground for 20 sov to run the same three miles in 16 minutes, and to the disappointment of the cognoscenti present, he won it easy.

[This beats the express riders with the President's message.]

Major Cartwright's match to ride *two* horses from Turner's Hill to Westminster bridge, 32 miles, in an hour and fifty minutes, was won cleverly on Monday, the Major riding full 12 stone. The first horse did more than 18 miles within an hour, and the second performed the remaining 14 miles very easy in 45 minutes. Betting was 6 to 4 on time.

SALE OF HUNTERS.

The Hunting Stud of the late George Redmond Hulbert, Esq. was sold at Aston Lodge on Monday last, when the well known judgment and liberality of that gentleman in the selection of his horses brought together the largest assemblage of respectable company that we have witnessed on any similar occasion; and the general expression of regret for his loss as a neighbour and a gentleman, must have been highly gratifying to his surviving relatives. Most of the principal sportsmen of this and the adjoining counties were present. The horses fetched the following prices:—Pirate 305*l.* to Earl Howe; Parry 250*l.* Mr. Cholmeley; (these two horses were purchased by the late Mr. Hulbert of Sir Henry Every;) Sindbad 200*l.* Mr. Coke; Ruby 190*l.* Mr. Sutton; Aladdin (Mr. Hulbert's hack) 170*l* Earl Howe; Waxlight 160*l.* Mr. Walmsley; Ranzelman 160*l.* Mr. Richardson; the Abbott 140*l.* Mr. Heap; Forsythe 84*l.* Mr. Brown; Mango 75*l.* Mr. Hunt; Ramadani 75*l.* Mr. Calvert; Domingo 65*l.* Major Bilbie; Negro 51*l.* Sir C. Colville; Christmas (a two year old colt) 63*l.* Mr. Brown; Brood Mare (Fairy) 36*l.* Earl Chesterfield; Brood Mare 24*l.* Mr. Phillips; Valentine (a yearling) 36*l.* Earl Chesterfield; Redgauntlet (a foal) 24*l.* Mr. Edge—Total 2,105*l*

AMERICAN SKATING.

Mr. William Easton started from the town of Putnam on lake Champlain, in Vermont, on Monday morning, the 12th ult. at 11 o'clock, and arrived at Fort Edward, at half-past 4, the same evening. He started from Fort Edward the next morning at 9 o'clock, and reached Waterford the same day at half-past 2 The whole distance is 90 miles, and the time of performance 11 hours, all the way on skates. This is 8 18-100 miles in an hour.

MISCELLANEOUS.

A contract has been made for a canal from the city of Lancaster to the Susquehanna river, a distance of 18 miles, for $53,240, to be completed by the 4th of July, 1827. There are to be nine dams and nine locks, averaging about seven feet lift each.

By the 16th section of the act of the Legislature of New Jersey, lately passed, incorporating the "New Jersey Delaware Oyster Company," the company are bound to pay to the state, for the privileges granted them, before they commence operations, $1000, the like sum on the 1st of May, 1827, $2000 on the 1st of May, 1828, $3000 on the 1st of May, 1829, $4000 on the 1st of May, 1830, and $5000 on the 1st of May, 1831. Citizens of New Jersey are not excluded from catching oysters in the waters where the company are authorized to carry on their operations, but are prohibited selling them to citizens of other states. [*Trenton Fed.*

The total of the cotton crop of the United States, for the year ending October 1, 1825, is said to be 569,249 bales, being an increase of 60,001 bales on the crop of the preceding year.

The bill now before Congress, providing for fortifications, appropriates $795,000 for the year 1826, to be expended on the following works:

Fort Adams, at Brenton's Point,	$100,000
Fort Hamilton, at New Utrecht Point,	75,000
Fort Monroe, Old Point Comfort,	115,000
Fort Calhoun, Rip Raps, on Chesapeake,	80,000
Fort at Bogue Point, North Carolina,	25,000
Fort at Oak Island, North Carolina,	30,000
Fort at Mobile Point,	90,000
Fort at Fort Chef Menteur,	85,000
Fort Jackson, at Plaquemine,	90,000
Fort at Bayou Bienvenue, Louisiana,	90,000
Repairs and contingencies,	15,000

LARGE HOG.

A hog, eight months old, weighing when dressed, 360 lbs. was raised the past season, by Mr. Jeremiah Beals, hair-dresser in this city. Good judges pronounce this the best pork that has been fatted in this vicinity for a number of years.

A NEW METHOD OF HATCHING CHICKENS.

We have read of the man who applied to the Lord Mayor for a patent to hatch chickens by steam, but it appears a less expensive method may be adopted. In Mr. Dowker's warehouse, (the London carrier) there were about 50 sheets of wool deposited, and while Mr. W. Wilson, the agent, and his men, were busily employed the other day, they heard a chirping noise as of chickens, like enough, as the result will prove. On removing five or six of the sheets, they discovered ten chickens and a rotten egg. The birds were all alive but not healthy and strong, for they had nothing to eat since they came into the world, and their stomachs were rebellious. They were fed, put under a hen, and are now all healthy and strong. No hen could have access to the place where they were discovered. It appears the eggs had been deposited on some straw under which the wool had been laid, and the warmth created by the quantity had nurtured the eggs, and produced the existence of the brood. Then let not the Lord Mayor grant patents (*if he can*) for this purpose, as a few eggs, a bundle of straw, and a pack of wool, will bring forth chickens in abundance. [*Westmoreland Gazette.*

RECIPES.

RECIPE FOR PICKLING BEEF,

Which, from experience, we can recommend.

Soak the beef 24 hours in fresh water.
½ lb. salt petre.
1 lb. brown sugar.
1 qt W. I. molasses.
8 galls. water.
Salt enough to make the brine bear an egg lightly
Skim the brine.

TO SALT HAMS.

For three hams, pound and mix together, half a peck of salt, half an ounce of salt prunella, three ounces of salt-petre, and four pounds of coarse salt; rub the hams well with this, and lay what is to spare over them, let them lie three days, then hang them up. Take the pickle in which the hams were, put water enough to cover the hams with more common salt, till it will bear an egg, then boil and skim it well, put it in the salting tub, and the next morning put in the hams; keep them down the same as pickled pork; in a fortnight take them out of the liquor, rub them well with brine, and hang them up to dry.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 6, 1826.

☞COLUMELLA on wool and sheep in our next.

☞ A correspondent asks the opinion of those who have reflected, or have experience on the subject, whether the water of a *tannery* would answer the valuable ends derived from irrigation with *pure water;* about the *latter* there is no question.

☞ "SNAP DRAGON" recommends the use of the term foaled, instead of foalded, and drowned, instead of drownded—sometimes used by mistake.

Having ventured to give our opinion in No 38 of this volume, upon "Col. Powel's acknowledged judgment, in breeding sheep with different degrees of various blood, adapted to the circumstances of various sections of the country," we conceive it may be proper to state, that we are assured, his "own intelligent observation" has been the basis of his opinions, and "would have corrected" any erroneous impressions which may have been conveyed by "Chancellor Livingston and other writers upon Merinoes."

Nearly twenty years since, having seen importations of Spanish sheep, he visited Europe, saw the Rambouillet and other flocks in France—rambled several years about the agricultural districts of Great Britain—attended shows and sheep shearings without number—became intimate with the most able and publick spirited improvers of sheep husbandry, both great and little, as well upon their estates, as at the meetings of the agricultural board; examined the royal Merino flocks, passed some time upon estates devoted to Merino sheep—on his return, after travelling from Georgia to Maine, he has devoted himself zealously to agricultural pursuits, making *annual visits into various states,* in furtherance of his object: from one of which he has recently returned, making a tour of nearly seven hundred miles.

It is true he has no Merino flock—nor has he any Southdown *flock.* He has some imported Southdown sheep, a flock of *mixed Dishley and Southdown,* of the old families imported by Beans—half a dozen high bred imported New Leicester sheep, with some individuals, of mixed Tunisian, Southdown, Irish and Dishley blood. It may be well to state that although he has bred sheep for some years, all the offspring have been gratuitously disposed of, except five, for which he required but the butcher's price.

On reference to the Report upon the Pennsylvania Agricultural Exhibition for 1823, it will be seen that he took the premium for the best Merino ewe; that Thomas Serrill took the premium for the best Merino ram; and on reference to the Report upon the Exhibition of 1822, it will be seen that Thomas Serrill took the premiums for the best Merino ram,* and best Merino ewe, all of them having been derived from Mr Serrill's flock, which were crossed with a ram of Mr Waln's breed, sprung from his imported sheep of SOUTHDOWN and Merino blood.

☞A FOX HOUND LOST—stout and very handsome, black body, white belly and neck and left side of his head; his tail, it is believed, is tipped with white. Any person finding said dog, and leaving word at Mr. H. Amey's smith-shop, in Paca-street, will be handsomely rewarded.

P. S. The above description may be inaccurate in some small particulars, as the owner had possessed the dog but a few days before he leaped over the kennel, and went off.

There is some reason to believe that the dog was picked up and taken off by a hog-driver residing in Green county, in Pennsylvania; and the Editor of the American Farmer pledges the thanks of the owner to any gentleman who will give him information respecting the dog—the name of which is "*Sportsman.*" The dog is unbroken, and valued chiefly for his blood and the gracious manner in which he came into the possession of his present owner. If any one into whose hands he may have fallen, has innocently paid for him a valuable consideration, the amount shall be reimbursed by the Editor of the American Farmer, through any neighbouring Postmaster. The Editor of the American Farmer requests the aid of the Postmasters and Editors of papers between Baltimore and Pittsburg in recovering the dog, which was a present from a friend to his present master. To all true sportsmen he confidently appeals. They will know how to appreciate his anxiety to recover a favourite domestic, however humble—and, the dog being recovered, if any gentleman will keep him securely until Mr. Skinner can be informed by letter; or if he will send the dog to Baltimore by some trusty wagoner, all expenses will be cheerfully paid, and the favour returned by any means in the power of the Editor of the American Farmer—who takes a particular interest in the recovery of the dog, and is furthermore authorized by the owner to offer as a compliment to the gentleman most instrumental in his recovery, the first and second volumes of the American Farmer, and a handsome edition of Coxe on Fruit Trees, and of Davis Agricultural Chemistry. Editors of papers printed on the route from Fredericktown to Wheeling and Pittsburg, will confer a particular favour by giving one insertion to the above.

☞ The next meeting of the Trustees of the Maryland Agricultural Society will be held on Thursday, the 20th of this month, at the city residence of the Treasurer of the Society.

There is occasion and there will be ample inducement for a full meeting of the Board.

DOCTOR JOSEPH KENT, who has so long and faithfully represented a portion of this state in Congress, has been called by a more general expression of its confidence, to fill the office of Governor. Thus has his native state emphatically pronounced—"well done thou good and faithful servant."

☞The Editor will acknowledge as a favour some seed of the fine yellow tobacco of Maryland from as many of his subscribers as will have the goodness to contribute, each a small portion. They are for gratuitous distribution to persons worthy of every attention to their wishes.

TOBACCO.—Number of hhds. inspected in the city of Baltimore, for the year 1825. . . . 17,751

Number of hhds. shipped for the year. 16,716

CONTENTS OF THIS NUMBER.

Domestic Manufacture of Silk and Brandy—Mr. Western on the Improvement of Grass Land by winter flooding—Production of Fine Wool in Ohio—On the Importance of Neat Cattle, by J. H. Powel, Esq.—Experiments on the use of [illegible], by Wm. M. Barton—On the Cotton Crop—On Merino Sheep—A Whisper to a Newly Married Pair—Sporting Anecdotes from late English papers—American Skating—Miscellaneous Items—New method of hatching Chickens—Recipe for Pickling Beef—To Salt Hams—Editorial.

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* This ram clipped 13 lbs. of wool.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	33	35		
COFFEE, Java, ...	—	16	19		25
Havana, ...	—	15½	17½	18	20
COTTON, Louisiana, &c.	—	18	19		
Georgia Upland, . . .	—	15			
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33		37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	5 10	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	80	90		
FLOUR, Superfine, city,	bbl.	4 75	5 00	6 00	6 50
Extra . . . . do.	—	5 00	5 50		
Fine, ...	—	4 75			
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	55	57		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	70	90		
do. Red, ...	—	80	85		
do. White Flint, . .	—	2 00			
Rye, ...	—	54	55		
Barley, ...	—	95	1 00		
Clover Seed, Red . .	lb.	4 75		5 25	
Ruta Baga Seed, . . .	bush	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36		
Beans, White, ...	—	1 50		1 62	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	29		
HOGS' LARD, ...	—	9	10	12	
LEATHER, Soal, best,	—	26	27		
MOLASSES, sugar-house	gal.	45			
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	1 87½	2 00		
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2 00			
OIL, Whale, common, .	gal.	32	35		
Linseed, ...	—	90	95		
PORK, Baltimore Mess,	bbl	13 00			
do Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	5 75			
RICE, fresh, ...	lb.	3 1-8	3½	6	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	5½	7½	10	12
WHISKEY, 1st proof, .	gal.	25½	27	38	50
PEACH BRANDY, 4th pr	—	80	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37½	50	
SUGARS, Havana White,	c.lb.	13 50			
do. Brown, . .	—	10 75	11 00		
Louisiana, ...	—	10 00	11 00		none
Loaf, ...	lb.	19	22	20	25
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	75	80	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	18		25	
SALT, St. Ubes, ...	bush	46			
Liverpool Ground . .	—	50	52	62	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 50		
Lisbon, ...	—	1 15	1 20	1 62	1 75
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed, but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled,	—	33	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor by JOHN D. TOY, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

FOR THE AMERICAN FARMER.

"SHEEP."

"Hints for 'unskilful and speculative men.'"

Columella asserts that

"The covering of wool on the head and legs is almost peculiar to young sheep" * * * * * "and the abundance of yolk is rarely found on the best woolled animal, nor is this ingredient at all necessary, much less 'essential,' as Mr. Powel supposes, for the 'support of the fleece' * * * * *

"An excessive secretion of yolk is probably a disadvantage both to the animal and the wool" * * * *

Columella.
American Farmer, Dec. 30, 1825.

Refutation.

"The Merino sheep in Spain is an animal below the middle size." * * * * *

"These animals seem absolutely buried in wool. It exists on their *foreheads, almost as low as the eyes*, and on their *cheeks;* covers their bellies, and *envelopes their hind legs*, and sometimes *their fore legs, down to their very hoofs.*" * * * *

"Another cause of difference, which may also respect different breeds, and which certainly influences different individuals of the same variety, is the proportion *of the grease or yolk*, which imbues all wool, but preeminently that of *the Merino.*" In consequence of this superabundance, the fleece involves in it to about one-sixth of its depth from the surface, a great quantity of dust, earth and other matters, either floating in the air, or lying on the ground, so as to give the Merino sheep a very dark and *dirty* hue, corresponding chiefly with the color of the soil. *As it happens that the finest fleeces* have usually the *greatest quantity of yolk*, we may in unwashed sheep, living together, of the same age, and at the same season, form a tolerably accurate conclusion, as to *the fineness* of the wool from the degree of *darkness on its surface*, which is also greatest on the finest parts of the fleece, as on the neck shoulders and sides."

Communications to the (British) Board of Agriculture, vol 5, pages 342, 343, 344, 355.—1807.

Yolk necessary to the growth of fine wool.

"Unless therefore, a finer fleece can be combined, with a quick feeding carcass, which from the great portion of yolk that seems necessary to the growth of fine wool, does not appear highly probable, it is hardly to be expected that the Merinoes or their crosses will soon become a favourite stock on the arable lands of Scotland."

Appendix to the General Report of Scotland, vol. 2, page 183.—1814.

Yolk renders the wool soft, pliable, &c.

"Yolk the peculiar unctuous secretion, which exudes through the skins of sheep, and which by intermingling with the pile of the wool, renders *it soft, pliable and in proper condition.* It has somewhat the same effect upon it, which oil has on a thong of leather, when kept in, and perfectly saturated with it. The disposition to the production of this substance in sheep is favourable to the valuable properties of the wool, and should be attended to by the sheep farmer in fixing his stock."

Complete Farmer, 4to.—1807.

Churchman (a Pennsylvania Farmer) on the importance of Yolk.

"My flock consists of about a thousand ewes. * * * * Having always regard to their healthful appearance, I select sheep which *carry wool to the hoofs*, and on their *heads*, to *within about an inch of the nostril.* The wool should be a little curled—*the fleece should be well supplied with yolk.*"

Memoirs Penn. Agric. Soc'y, pages 102–3.—1824.

The yolky consistence protects the sheep as well as the wool.

"In the pure Spanish breed there is a wonderful capacity for resisting the effects of climate on the quality of the wool. The extreme exudation from the body of the animal, yielding a *yolky consistence* at the interior of the fleece, and, by its mixture with the soil, forming a kind of coat of mail on the outside, makes *the wool almost impervious to wet*, and *protects the sheep* exceedingly from the injuries of climate."

Communications to the Board of Agriculture, vol 6, page 69.—1808.

Yolk is not only necessary to the production of a valuable fleece, but is the very pabulum of wool.

"Another topic, which might with great propriety be recommended to their attention, is the quality of that substance which is most commonly found intimately mingled with the pile of our fleeces, which on account of its yellowness and consistency, its egg-like appearance, is aptly denominated *yolk*. The investigation of its properties, and of *the good effects* which it produces upon the fleece while growing, is more properly the business of the grazier, than of the woolstapler, and he has the most abundant means of acquiring information. Hitherto it must be acknowledged that they have been too much neglected; yet the few facts with which we are furnished indicate *that without the assistance of yolk*, or the application of some other substance, which shall act as a substitute for it, wool possessing *the best qualities* cannot be produced. The celebrated breeds of Berry, of Castile and of Persia, we are informed, furnish the *most copious supply of yolk*, and at the same time yield those *valuable* [illegible] which are eagerly sought after by the manufacturers of the countries where they are shorn, in order that they may be able to supply even distant markets with the most valuable commodities. The attempt to improve the fleeces of England, *of Germany*, and of Sweden, by the introduction of foreign blood, has uniformly exhibited proofs of the value of *this nutritious substance; not only by communicating to the offspring a more soft and attenuated pile, but by enabling them to yield for its support and preservation a much larger supply of* this *valuable fluid.* And even the native breeds of our own Island, whose unmingled blood has flowed through several ages, if attentively examined, evince that the power of producing a copious supply of healthy and nutritious yolk, is one of the most important qualities of wool bearing animals, and that there is scarcely any property in which they differ from each other more widely The fleece itself when shorn without washing, most clearly shows that the breast and shoulders of sheep have generally yielded it much more freely than parts remote from the vitals; and the good qualities of the pile which is produced there are distinguishable by the most untaught observer." * * * * *

"In the southern parts of the Island, it is sufficient *for the production of a coat* which enables *the flocks to endure the rigours of winter* without any additional covering, sufficient also to prevent the *fleece from becoming thin or hairy;* but in the northern parts of the kingdom, and upon the hills of Scotland, some of the breeds of sheep produce it in such small quantities, as to render it unsafe for the farmer to expose his flocks to the severity of the winter quarter, unless he furnish them with an artificial covering of grease mingled with tar, in order, as he says, to keep them warm. Yet he confesses that he finds this *dirty coat as indispensably necessary to the good qualities of the fleece* as it is to the health of the animal; without it the wool becomes hairy, thin and light, with it the fleece is full, soft and rich, possesses a sufficient quantity of healthy yellow yolk, and appears to thrive much better after the tar has been laid on than it did before; the nature, the qualities, and the condition of the wool are most wonderfully improved. From these circumstances we conclude that the yolk, a substance which has been so greatly neglected, yet has so long deserved the attention of the grazier, which has been perpetually under his eye through a long course of ages, is not only necessary to the production of a valuable fleece, but is the very pabulum of wool. The French have taken much greater pains to ascertain the nature of this valuable oil, and its effects upon the fleece than the English." * * * * * *

"On the other side of the channel, intelligent manufacturers have been encouraged to institute experiments, and perform them with such ease as to convince themselves that some of the best qualities of wool depend greatly upon the quantity of yolk, in which the fleece is produced. The English wool which they tried, and found remarkably deficient in this respect, they pronounce to be 'hard, dry and rotten.'" * * * * * *

"Some who have thought upon the subject have concluded from the oiliness of the yolk, that it consists of the common perspirable matter, which all animals exude, mingled with a portion of that greasy substance which sheep so copiously secrete. But [illegible] Vauquelin who has submitted it to the test of chemical analysis declares, as the result of his experiments, that 'the greater part of it is a soap, with a base of potash,' and that the remaining portion consists of that salt in a state of combination with other substances." * * * * *

"In general this substance has been noticed without any particular reference to the breed of the animal, or the qualities of the fleece which it bears: sometimes as totally disregarded as the sand, or the hay seed which are accidentally mingled with the pile. Yet the disposition to produce this valuable animal soap is certainly as important, as some other characteristics of the sheep, and ought not to be overlooked, when we describe their different varieties, or select them for our farms."

"I have not yet seen any of those animals or their produce which are said to afford a staple equally fine from every part of the body, but conjecture that if this breed were minutely examined, it would appear that the yolk is produced in equal quantity on every part of the carcass. The sheep also which produce wool upon their bellies and shanks, like the Merino family, most probably yield a good and healthy yolk down to the very fetlock; while those which cover these parts with a short and opaque hair, like the Wiltshire breed, afford the secretion so beneficial to the staple, only from the upper parts of the half covered body. The dissimilarity of the fleeces yielded by these two kinds of sheep, the complete envelopement of the one, and the scanty coat of the other, lead us to suppose that the quantity of wool, which we produce from an individual sheep, is in a great measure regulated by the conduct of the grower. If he approach the purity of the Spanish blood, he clothes his flocks in a kind of surtout, which enwraps every part of the animal, except the lower extremity of the face and the feet; and by selecting his rams from the Downs of Marlborough, if he were ambitious of such a distinction, he might probably produce a race entirely devoid both of wool and of yolk." * * * * *

"The bad effects of water upon the pile while growing may be owing to the readiness with which it mingles with the yolk, and carries off a quantity of that animal soap, *which is so necessary to the good quality* and *even existence* of the fleece; for if care be taken to prevent this by the skilful application of tar mingled with butter, which act as repellants to the water, the lower part of the staple, which grew after the mixture was applied, contains a sufficient *supply of rich and nutritious yolk*, and is a much superior sort of wool to those points of the pile, which have been exposed without protection to the dripping wetness of the wintry season." * * * * * * *

Essay on Wool, by John Luccock,
Woolstapler, Leeds, p. 80, &c.—1809.

(To be continued on Southdown, &c.)

WOOL.

The production of wool is becoming annually a subject of increasing interest and attention among the farmers of the middle and northern states; and it is highly desirable that those who have had experience in this branch of our domestic industry could be prevailed upon to communicate the result of their observations to the publick. My object in writing this article is rather to invite others to this work, than to offer any thing of my own in that way. The recent importations of Saxon sheep prove that the Merino is capable of a high degree of improvement in a very different climate from that in which it has long been accustomed in Spain. It is very important for the growers of wool in this country, to know by what means this improvement has been effected. Is it the effect of climate? Have we any experience in America on this subject? It is pretty well known that wild animals of the south yield finer furs than those of the north, although nature, with her accustomed providence, has given the latter the greatest burdens: but the Merino sheep, if it were originally a native of a southern climate, (which is doubtful,) constitutes an exception to this rule. Its fleece is not only finer, but thicker than any of the woolly race. Or is it not probable that other causes than that of climate, have overcome its influence, and accelerated the improvement of the race? Some are very confident that a scantiness of food improves the quality of the Merino wool, and that to this cause is to be attributed the great improvement of the Saxon Merinoes. It is not certain that this effect is not in some degree produced by that cause, although such a fact would be a heavy drawback of the satisfaction which a good farmer enjoys in keeping his stock in fine order. I have mostly observed, that those who are most tenacious of this opinion, have flocks in bad condition, exhibiting the appearance of negligence and starvation; and I have been led to doubt whether the theory was the cause or the *effect* of the bad condition of their flocks. No doubt all judicious breeders would select the finest to breed from, and it may be questioned whether this operation alone would not be sufficient to produce all the change found among the Saxons. If so, it becomes an inquiry of some interest, what is the best mode of effecting this improvement, by crossing frequently, or breeding *in and in*. If there be a general principle of nature, which propagates her defects in preference to her most perfect works—the practice of breeding *in and* in would seem more calculated to indulge this disposition of dame nature, than crossing, because there would be no check to a progressive deterioration of any stock which possessed any defect whatever: which is beyond doubt the case with all animals. This principle has been more attended to, and must be better understood by the breeders of horses, than any other class of men. The single fact that no wild animals are found in such high perfection as those of the same species which have been domesticated, is deemed a strong argument to prove that nature inclines rather to propagate what man deems her defective properties but the argument is not conclusive by any means, we neither find the best nor the worst animals in a wild state, nor is it known that they do not deteriorate below the average in which they were first found. They resemble each other more than domestic animals in all their properties, which would be the obvious effect of breeding in *and in*. Any skilful breeder could soon produce a stock thus assimilated, as has been done by Mr. Bakewell in both sheep and cattle. His plan was to purchase the best formed animals for his purpose, as long as he could find better ones than his own, but no longer; and there would seem to be much good sense in the scheme: he would not yield to the idea that consanguinity was opposed to the known law of assimilation between the offspring and parent; and although he may have been correct in his theory as to sheep and cattle intended only for the shambles, yet it does not follow that our intelligent breeders of horses pursue an erroneous practice in frequent crossing. There are so many qualities essential to the character of an excellent horse, and these are sought with so much critical attention, that nothing short of a combination of all the good properties which can be found in every species of the race, will satisfy us; these are only to be obtained by the most judicious attention to crossing; and where so much is sought and such extensive variety is given to make the selection from, it is scarcely probable that we shall ever see the time, even if Mr. Bakewell's theory be true, when the horse cannot be improved by crossing.

One important fact in connection with this subject ought not to be lost sight of: we have a species, or rather variety of the horse called the "*blooded horse*," originally produced by crossing. This species is esteemed by every amateur as the best, and is distinguished by certain marks which good judges cannot mistake. No good breeder will depart from this stock, nor is it contended that it degenerates, or that it becomes necessary to renew it by resorting to the original crossing by which the stock was produced. If this stock does not degenerate, is it not a strong argument for Mr. Bakewell's theory? So long as we keep within this line, are we not in fact breeding *in and in*, although from remote degrees of consanguinity? These suggestions are made with a view to induce deliberate reflection upon the important subject, free from the influence of opinions not founded on reason or experience. In breeding fine woolled sheep, the great desideratum is to procure such a fleece as will sell for the highest price. Experience has shown that fineness and uniformity are the most essential ingredients in the value of a fleece; some sheep have about four or five inches square of very fine wool on the shoulder and side; the remainder averaging no better than half blood fleeces; others, though less fine on the shoulder, average much better. In selecting, therefore, strict attention should be paid to these properties; and as the inspection of the wool over the whole body of the sheep will be the best possible guide to determine the value of the animal, there is no occasion for examining other marks—such as the yolk, dewlaps, and woolly heads. I should as soon think of judging of a piece of cloth by the colour or quality of the packing around it, as to look for such marks when the wool could be seen. As to the best mode of improving a flock, there is, no doubt, much to learn; and perhaps the shortest method of acquiring the best information on this subject, would be for those interested in the business to procure through some channel fully to be relied upon, minute information of the treatment of the Saxon flocks. COLUMELLA.

HOW TO TEST THE VALUE OF ROOT CROPS.

Extract to the Editor, dated Dec. 30th, 1825.

Permit me to suggest, through you, to the committee who point out the crops on which premiums will be awarded, the propriety of requiring, in all root crops, their comparative value, taking corn for the standard. The importance of this will be perceived, when you take into consideration, that it may require three or four bushels or more for the purpose of fattening stock, in place of one of corn. Now, to make an experiment complete, it would be necessary to take a piece for corn, and let it be manured equally as that intended for a root crop, and in both cases let the culture be perfect, which will give a comparative view in quantity; then let there be two of any kinds of animals, (or more, as it would make the experiment more complete,) of *equal size* and *condition*, one half of which to be fattened on corn and the other on roots. The result will give the comparative value as a food for fattening. But experiments ought not to be confined to fattening only; because roots may be much more valuable to keep stock on than to fatten with, from the circumstance of its taking more than corn, and of consequence keeping them fuller, which is certainly a matter of importance. It would be well to make trials on different kinds of stock, as roots might be better to fatten black cattle than hogs, or with sheep they might succeed better still, or they might answer best for milk cows, or some for one kind and some for another.

In some parts of England carrots are raised for horse feed, and considered the cheapest and best that can be used. If trials were made of feeding roots in all these various ways by some gentlemen who have *time* and *means*, and registers kept that they might be published, it would confer a great benefit on the agricultural part of the community.

From what I have seen and what I have done myself in the culture of roots, my own mind has never been satisfied that root crops (potatoes excepted) should be cultivated on a large scale in Maryland, or in other words, for more than culinary purposes. Our hot sun and frequent droughts make so much against them, that they very rarely succeed to *perfection;* whereas corn delights in hot sun, and if there be light rains sufficient to wet the surface one or two inches occasionally through the *making* season, there will be a good crop. It would, therefore, be necessary, to establish the propriety of root cropping, to keep an exact register of such crops for several, say at least ten, years, which, by throwing together, would give you the average, which, compared with a like register of corn crops of equal manuring and culture, would give the best comparative view.

In all these experiments, a register ought to be kept of expenses, without which the experiments cannot be complete.

Yours, respectfully,
DANIEL ZOLLICKOFFER.

COTTON.

There has been a contest between certain planters, near Edenton, as to the swiftness and dexterity of their slaves in picking cotton. The following results may interest some of our readers who are growers of that article, and be useful as data for calculations about the crop.

1st day—lbs.		*2nd day—lbs.*	
Derry,	154½	Derry,	178½
Olla,	117	Olla,	185
Harry,	101	Harry,	167
Jeff,	100	Delilah,	108
Delilah,	99½	Prov,	107
		Primus,	90
		Boy Ned, (12 years old,)	91

CULTURE OF TOBACCO IN MISSOURI.

Missouri is evidently, in a very high degree, adapted to the culture of tobacco, which must, in our opinion, become one of the staple commodities of the state. Several excellent planters from Virginia and Maryland, have settled among us, and pronounce our soil and climate better suited to the tobacco crop than the states from which they camgrated; and assure us, from the experiments they have already made, that when we shall be as well prepared with good houses, &c., and pay the same attention to the crop, Missouri tobacco will be equal, if not excel, that of either Virginia or Maryland. This is indeed a pleasing prospect, and one, which we have no doubt will, in a few years, be fully realized by the industry of our farmers.

[*Missouri paper.*

HORTICULTURE.

PLUM AND MORELLO CHERRY.

To the Editor of the American Farmer.

I find in your paper of April 1, page 13, a communication of James Worth, on the diseases of various fruit trees, in which the excrescences that have proved destructive to the plum and morello cherry trees, are supposed to be caused by "a mere exudation of sap in the tender branches, occasioned by a bark-bound state of the trunk;" and that the insects found within these, are "a consequence, and not the cause, of the disease." The remedy he recommends, is, "to score the bark in a perpendicular direction along the trunk." The high standing of Mr. Worth as a horticulturist and farmer, acquired by many and judicious publications on these subjects, and which have evinced scientific research, acute observation and practical knowledge, renders it somewhat hazardous to attempt to controvert his opinions: but as I think he has mistaken both the cause and the cure of the evil, I beg leave to state some facts which have come under my personal observation, as the ground of my scepticism; and I am sure Mr. Worth will be the first to pardon me, if the remarks I am about to make shall tend to elicit truth.

In 1811, I resided in the village of Kingston, when this disease of the plum and cherry threatened their extinction in the neighbourhood. I was advised to place a sod of earth, grass under, at the first separation of the branches from the trunk. I followed the direction; and, the trees being small, the turf collapsed about the trunk. The trees on which this application was made, remained healthy, or were but partially affected; while others not attended to, and five-sixths of all in the village, were diseased and destroyed.

In 1818, I brought from Kingston, and planted in my field (my garden not being then prepared) twenty or thirty plum trees, of two to five feet high. In June and July following, excrescences appeared upon several branches. As fast as these were discovered, the limbs affected were cut off and burnt. The trees were again transplanted the subsequent autumn into the garden, and have not since shown a particle of the disease.

In the spring of 1824, I procured 400 small plum trees, principally sprouts, from a garden two miles distant, in which the disease was making great havock, though those I selected were apparently free from it. They were put in nursery. In the summer following, I cut down, or pulled up, nearly fifty, upon which tumors had began to appear, and was particularly careful to burn every piece of the diseased wood. Not one of the remaining trees was affected during the last summer.

In the spring of 1825, I had nearly a like number of plum trees from the same garden, which I also put into nursery. The tumor appeared on twenty or thirty; and I adapted the precaution of amputating and burning, under a sanguine belief that I thereby effectually stopped the evil.

The above are the only instances of the appearance of this malady among my plums while I have resided in Albany, although I have more than one hundred trees in my garden, and two thousand in nursery. I do not know of any diseased trees nearer to me than the garden from which I obtained my stocks.

The preceding facts led me to make the following conclusions:—

1. That an insect is the cause, and not the consequence of the tumor.

2. That this insect is not furnished with wings to enable it to fly; and that an inverted sod placed upon the lower bifurcation of the tree, will prevent its crawling up to make a lodgement in the "tender branches."

3. That its migrations are slow, and are principally effected by the transportation of trees in which the ova are deposited. And

4. That by a prompt use of the knife, in the early stage of the disease, and careful attention to burn all the diseased wood, the evil can be limited, if not wholly overcome.

Before I attempt to fortify myself by the opinions of others, I have a further remark to make upon Mr. Worth's hypothesis. The effect of a tree being bark-bound, I should think, would be, to contract the sap vessels, and to diminish the supply of sap which the root sends through the trunk to the branches. How then can we conceive such a plethora to exist in the latter, as to cause a spontaneous extravasation, or exudation, of sap? The effect of scoring the exterior bark, which is the remedy prescribed, would be, by removing the stricture to enlarge the vascular vessels, and cause a greater flow of sap to the extremities, and thereby to increase, rather than diminish, the cause of the disorder. Man, by his vices and his follies, has multiplied the diseases of the human family, and may have increased those of the brute creation. But the laws which govern diseases in the vegetable kingdom are not very liable to change: and I cannot call to mind any *new* disease which has devastated *this*, which cannot be traced to the agency of some species of the animal kingdom. The disease of the plum and cherry, now under consideration, is of but recent origin. I have scored cherry trees to render them more thrifty; and the experiment came near being fatal to them. The circular bark, on being scored, rapidly contracted, and drew with it the longitudinal layer, which the knife had partially penetrated; and it was only by a prompt application of cow-dung and bandages, that the evil was prevented. I dislike scoring trees for any purpose. It seems too much like scoring the skin of a poor hide-bound animal, to make him thrive. A good scouring, and plenty of food, will help the bark-bound tree, as well as the hide-bound animal. A wash of ley, or soap-suds, will give ample expansion to the bark of a tree.

The late Professor Peck, of Cambridge, wrote a paper on this subject, in 1819. It was published in the Massachusetts Agricultural Repository of that year, accompanied with drawings of the insect of natural size, and magnified. How far these go to strengthen my theory, may be seen by the subjoined extracts, which I make from his communication. I am not enough entomologist to decide, whether the insect described has wings to enable it to fly; but I find several species of the *rynchœnus* described by Fabricius as having no wings; and the one figured by Professor Peck appears to be of this kind.

"The plum trees, *prunus domestica,* have for several years, (says Professor Peck,) been disfigured with irregular swellings on the younger branches. The seat of this disease is in the bark. The sap is diverted from its regular course, and is absorbed entirely by the bark, which is very much increased in thickness, the cuticle bursts, the swelling becomes irregular, and is formed into black lumps, with a cracked, uneven, granulated surface. The wood, besides being deprived of its nutriment, is very much compressed, and the branch above the tumor perishes. The cherry tree is affected in a similar way.

"When the Board of Trustees met at the seat of John Lowell, Esq. in Roxbury, on the 27th of June last, Mr. Pomeroy took from a cherry tree in Mr. Lowell's garden, a small branch diseased as above mentioned. On taking off a thin slice of the tumor, I found it was inhabited by living larvæ; and flattered myself that the disease of both trees arose from the same insect. I brought the branch home with me, and placed it in a large glass phial. On the 6th of July, I perceived that the larvæ had left the tumor, and were uneasy in the bottom of the phial. A vessel of earth was immediately prepared; the larvæ, when turned into it, buried themselves instantly. On the 30th of the same month, or twenty-four days from their leaving the bark, the perfect insects began to rise. They proved to be insects which I had long known to occasion the fall of peaches, apricots and plums, by the larvæ eating into the kernels of those fruits long before they had acquired half their growth.

"Mr. Pomeroy was so obliging as to bring me three tumors cut from his plum trees, late in the season, but the larvæ had left them. Being therefore uncertain whether the disease of the plum tree is to be attributed to this insect, or to another species of the same genus, I would call it the cherry weevil. It may be distinguished by the specific name of *rynchœnus* (*cerax,*)[*] &c.

"The evil produced by this insect cannot be wholly remedied; but something may be done to diminish the mischief, by cutting off the diseased branches. This, however, must be done at the right season, and must be the joint care of a whole neighbourhood at the same time. Those which furnished the data above set down, ceased to feed on the 6th July, rose from the earth on the 30th, and were soon ready to deposite their eggs in healthy branches. But if the diseased branches be cut off in the last half of June, a great number may be destroyed, and most effectually, by burning the amputated parts. It is possible, that in some situations they may be disclosed earlier; it will therefore be surest to prune away the diseased parts as soon as they appear, cleansing the trees *now* of the old tumors, that new ones may be more readily perceived."—pp. 311, 312, 313.

The greatest difficulty I perceive in the foregoing extract, is the circumstance of identifying the *cherry weevil,* as the Professor has denominated it, with the insect which causes the premature fall of our young fruit, by eating into the kernel. The fruit has been destroyed time out of mind, while the disease of the tumor is of comparative recent origin. In my own garden, the fruit is annually and extensively injured, and yet there is no appearance of tumors. Surely this could not be so if both diseases are caused by the same species of insect.

J. BUEL.

Albany, Dec. 17, 1825.

INTERNAL IMPROVEMENT.

FROM THE NATIONAL GAZETTE.

The acting Committee of "the Pennsylvania Society for the promotion of Internal Improvement," communicate to the public the following extracts from their correspondence with Wm. Strickland, Esq., and a communication received from him in reply to the same.

Mathew Carey,
Richard Peters, Jun.
Joseph Hemphill,
William Lehman,
Stephen Duncan.

Gerard Ralston, *Sec'ry.*
Philadelphia, Dec. 21, 1825.

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[*] Professor Say calls it *Cryptorhyneus nenuphar* of Herbit. See American Farmer, vol. 7, p. 79.

Extract of a letter addressed to Wm Strickland, Esq on the 19th September, 1825

"*Canals* and *Railways* present the most important of all subjects for your attention. Upon every matter connected with both, you will be expected to be well informed; and if you shall have to decide between them, you must be able to furnish the facts and circumstances by which the decision shall be produced. Much excitement prevails in this state upon the question whether railways are superior to canals, and the inquiries which are in progress in relation to them, are in the hands of men of ingenuity, and well disposed to the cause of internal improvement. It is however feared by many, that the question between canals and railways will have an injurious influence in Pennsylvania, as it will divide the friends of the cause of improvement, and thus postpone, if not prevent the commencement of the great works. The importance of correct information in relation to them is thus greatly increased."

"Those who have not had the same opportunities of testing the advantages of the mode of transportation which you now prefer, will pause unless you furnish facts and arguments of an entirely conclusive character."

"Do you contemplate confining railways to the transportation of goods and merchandise, or do you propose they shall also be employed for the carriage of passengers? If both, must there not be not only a single railway for the merchandise, but also a double railway for passengers? If these are to be formed, will not the expense of a railway be very considerable—say, if iron is at 14l. per ton, not less than 8000l. per mile Ought wood to be used in the foundation for the rails, thereby reducing the size of the rails, as has been suggested by some persons?"

"Do you contemplate the use of locomotive engines on railways in Pennsylvania?"

"Have you considered the difficulties and obstructions which the necessity to use steam engines to overcome ascents will produce, as these machines will require engineers and skill to use them, and to repair them, and many of them must be located in the midst of mountains far from settlements, and equally distant from the habitations of those who are competent to repair them?"

"The present establishments in the United States for the making of iron find a market for all the iron they make, at high prices. Pig iron, at Pittsburg, is 40 dollars per ton; bar iron 125 dollars per ton Would not the demand for iron for a railway from Philadelphia to Pittsburg increase the price, and could that demand be supplied within a reasonable time?"

"These propositions are not suggested as insurmountable difficulties, but as specimens of the matters which will be inquired of you when you return. It is not for the Pennsylvania Society to adopt a preference for any particular plan of improvement, or to discourage investigation. Its object is the improvement of the state, by the best plan, and, this accomplished, the members will be fully compensated for their contributions towards the same."

To the Pennsylvania Society for the promotion of Internal Improvement in the Commonwealth.

GENTLEMEN,

The queries proposed to me by the acting Committee respecting rail roads, contained in a letter of the Corresponding Secretary, dated September 19, 1825, have been duly considered by me, and all respecting them of an entirely conclusive character. I must be excused from any intention to offer opinions which may have a tendency to excite or divert the public from improving the state upon the most judicious plan. I am assured it is not the object of the society to give a preference to any particular plan of improvement or to discourage investigation.

If an extensive railway should be proposed in Pennsylvania, it ought to be a double line of edge rail, and calculated for the use of locomotive engines, for with them only as the moving power, consists any decided advantage over other modes of conveyance; I would form this double line of rail road at least ten feet apart, making it as nearly level as possible, or at any rate not to exceed one-tenth of an inch rise in the yard. It should be constructed for the transportation of goods, merchandise and lumber of all kinds.

If the country through which the road has to pass be undulating or hilly, I would seek a level, to its greatest extent, by winding round the hills, cutting through them, or tunnelling, which ever might prove, from accurate survey, to be the best and most expedient: I would avoid the frequent construction of inclined planes, with fixed engines, and carry the level or slightly inclined road as far as possible in successive platforms, or level stages, without assuming a higher level, until it became necessary to overcome a lift of not less than 50 feet at once; this would, of course, depend upon the nature of the ground upon which a second extensive level could be established; and so on, carefully avoiding all small lifts by inclined planes I must here be permitted to remark, that this plan does not differ much from that pursued in the location of the canal, and that it will be admitted to be evidently cheaper to cut through a hill, or form a tunnel for the passage of a rail road, than for that of a canal; and again, there is no country, however its surface may be varied, but what will afford as many facilities for the execution of the one, as the other: If, therefore, a succession of level platforms, or stages of rail road be established, and locomotive engines are made to ply upon each stage, it may be practically proved, that there can be no great difficulty in producing a transit of the same quantity of goods or merchandise, at the rate of six miles an hour, that is usually conveyed upon a canal at one third that speed. It is mainly from the application of steam to machinery as to the motive power, that a decided advantage is to be gained in the transportation of goods upon rail roads; and if speed is at all desirable, then, they are the best means by which it can be certainly, and most economically obtained. The practical efficiency of the locomotive engine, and its superiority over horses working upon canals, was easily proved by the evidence adduced before the committee of the House of Commons on the Liverpool and Manchester railway bill

The stationary engine and inclined plane affords equally as speedy and simple a mode of communication between two level stages, and may be constructed with a lift of 50 feet in a 1000 feet, for half the sum required to overcome the same elevation by lockage. Engines require perhaps more skill in attendance and repairs, than locks; and this may be urged as an argument against their use, "in the midst of the mountains of Pennsylvania, far from the settlements and habitations of persons who may be competent to repair them;" to this objection, I will only add that the management and repairs of locks and their sluices in the same situations, would be attended with nearly the same difficulties, but I take it for granted that there must be an attendant of either species of machinery who properly understands the subject. The extra power of the stationary steam engine, may be employed for manufactoring purposes, such as grinding grain, sawing timber &c If wood be used as the foundation for the rails, its depth, in order to afford sufficient strength for the support of a great weight, would be calculated to elevate the rails too high above the surface of the road, to allow a sufficient discharge for the rain water under them; and if the rails be reduced in size, and inserted in the wood, or bolted to it, it would be impracticable to give them an equal and uniform bearing throughout their whole length; and they would from this cause inevitably break; it is most essential that the ends only of the rails should bear, and hence a proportionate weight and strength of metal should be given to the intermediate parts.

I have no doubt but a demand for iron sufficient to form a railway from Philadelphia to Pittsburg, would increase its price considerably in Pennsylvania, and that there would be a great disadvantage experienced from the impossibility of the state being able to supply that demand within a reasonable period of time.

Various propositions may be suggested as untried and insurmountable difficulties in the management and conduct of rail roads, because they have never yet been used as a means of general or distant intercommunication; these are only to be understood by the fact, that they have been satisfactorily proved upon a small scale, comparatively speaking, but they have been practically applied to various surfaces of country; and there now appears in England to be a strong confidence among men of intelligence and capital, that there is in this country a necessity for a general extension of their advantages to facilitate the operations of trade and commerce.

It will be admitted, however, that there are situations where canals cannot be formed; and where, if formed, they may be ruinous and abortive experiments: but these can rarely occur with railways, properly constructed. A railway will always be, at least, a road. In making the foregoing observations, I do not wish to be understood, as the champion of this species of conveyance, in opposition to the known advantages of canals, but simply as expressing, in common with others, an honest opinion, derived from a personal investigation of facts, which may be presumed to have been exhibited perhaps upon too small a scale in England, to admit of an unequivocal recommendation to your society, or the people of Pennsylvania, as the subject of preference or experiment.

I enclose you the report of the committee of the Birmingham and Liverpool railway company, in which you will perceive the causes that have produced a delay in the execution of their work, and the confidence they still maintain of its high national importance.

Respectfully submitted by your obed't serv't,

WM. STRICKLAND, *Engineer.*

Liverpool, Oct. 20, 1825.

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

(Continued from p. 334.)

Chapter V.

ON DOMESTIC HABITS.

A clever writer says, "If a man, after the business and fatigues of the day, could return to his house where his wife was engaged with domestic cares and an attention to her offspring, he must be a monster of savageness and stupidity, if he did not strongly feel the influence of her virtues, and if they did not convey a soft rapture to his heart"

I never knew a man who studied his wife's comfort, in truth I never knew any amiable or domestic man, fond of frequenting clubs or taverns; and however a wife may conceal her displeasure, it must be always a matter of pain to her It is such an useless expense, (not to say a word of its *sinfulness*,) such a worthless waste of time, such a sottish, gluttonous thing! A man leaves his comfortable fireside, an amiable wife, and smiling babes, perhaps neglects business of consequence, he does what is contrary to the word of God and annoying to his wife, throws himself into the way of drinking, gambling, and a variety of temptations, squanders away money which most probably is wanted at home; and all for what? Just to pass an hour or two with a set of *bon vivants;* and then, with his head inebriated, his pockets lightened, and his heart certainly not benefited by the company he has been in, he comes home: the foundation for discord, at all events for coldness, is laid; for however his wife may have gentleness and good sense enough to avoid clamour and scolding, she certainly cannot feel much love or estimation for a man who seems to care so very little what she likes or dislikes.

But I will not suppose you addicted to drinking. This habit has become such an ungentlemanly vice, that what morality had failed to do, fashion has nearly effected. In respectable life, a drunkard now-a-days is nearly a phenomenon; and happy it is for the female world that such is the case! for the woman who has the misery to be chained to a drunken husband, in the emphatical language of Scripture, *has no joy.*

Much to be condemned is a married man, constantly rambling and wandering from his home for the purpose of passing away time. I really cannot understand what a husband, a father, and master of a house, can mean by the words "passing away time." Surely, if he wants employment, his house and grounds will amply furnish him with it; and if he wishes for society, he will find in his wife, children, and books, the best society in the world. Such a man may be at a loss for *company,* but certainly not for *society.*

There are some men who will sit an entire day with their wives, and a word scarcely escape their lips. Their social cup of tea comes on; and instead of enlivening the hour by kind and familiar chat, a pompous "Yes," or "No," is perhaps all that is uttered by the grand and sullen lord. Is this a mode of treating the companion of your bosom?—a companion with whom you might fearlessly "think aloud;" into whose faithful breast you might pour forth your thoughts, your plans, your intentions, your opinions of *every thing* and *every one?* And is this companion, perhaps the only one in the world who would not betray you—is she to be treated with sullen silence and cold reserve? "*The heart of her husband* may *safely trust in her,*" (*Prov.* xxxi. 11,) says the inspired writer; and yet this safe and faithful confidant is slighted, and her proud lord turns from her to bestow his frankness and loquacity on some one or other, who just hearkens to him, and then hies away, perhaps to betray him to the next listener.

I own I love to see a man and wife enjoying the pleasures of a little social walk; and when the tete-ã-tete is sweetened by confidential and affectionate conversation, it is, as the wise man observes, *a sight beautiful before God and man.* But, in general, how reversed is the picture! He saunters out with her, careless, cold, and uninterested; scarcely during the walk, uttering a word, or, when he does speak, so cold, so inanimate, are his brief remarks! And if her health is too delicate, (as is often the case,) to admit her to walk, instead of actively preparing the horses and vehicle to drive her out each day, "she may sit, and sigh, and fade away;" and her once sparkling eyes may look languid, and her once brilliant cheek may grow pale, for want of exercise: still he makes no exertion; something is the matter with the horses, or the carriage, or the jaunting-car!—and thus day after day is allowed to pass over.

Sometimes, if husband and wife happen to spend the day, or evening, from home, scarcely does his lordship address a word to her during the time; scarcely does he go near her; and at night when a little attention would be really necessary in muffling and preparing her to go out, *he* do such an unfashionable thing? No, truly. She may wrap round her mantle, or tie down her bonnet herself; and coughs and colds, "with all their train of rheumatic ills," may await her; but *he* will pay her no such attention. Admirable character!

Other men there are, all cheerfulness, gaiety, and good humour, while in the houses of their neighbours; who, as they return home, and knock at their own hall door, appear to turn round, and say to their harmonious attendants, cheerfulness and good humour, "My good friends, I am now about entering my *own* doors, where I shall probably remain, for a few days, totally destitute of all society but that of *my wife and family.* Of course, it will be quite unnecessary for me to trouble you again till Monday next, when I am to dine at my friend, Mr. B.'s, with a large party: I know I may be certain of your attendance on that day; till then, good-bye! shake hands!—good-bye, my two worthy friends;—good-bye!" Then, entering the hall, he hangs up his violin (as some one or other remarks,) behind the door, and proceeding, he arrives in the parlour "O dear, such a fire!—Just five o'clock, and no sign of dinner!—Well! what an irregular house!" His wife then pulls the bell, and up comes dinner. "Why, I thought this beef was to have been roasted? You know I detest boiled beef!—Oh, really, those fowls are quite underdone!"—"Why, surely, you might yourself have given some directions!" "O! ay, an excuse! Excuses never fail when there is occasion for them!" Such is the language of this fine *manly* man; his ill humour and loud speaking rising in proportion to the silence and gentleness of his wife. Admirable character, again, say I!—a mausoleum should be erected to your memory.

There are a few other characters in the world, (and happy is it for the world the number is but *few.*) whom I really dislike to stain my pages by mentioning;—men, or rather monsters, who beat their wives!—men, or rather monsters, who *publicly* cohabit with strange women, or perhaps are criminal with the female servants of their own house!—men, or rather monsters, who are intoxicated* every day! &c. &c. But let me dismiss the hateful subject, and leave such beings to that God whose laws they are so awfully violating.

Chapter VI.

ON ABSENCE.

Few women are insensible of tender treatment; and I believe the number of those is small indeed, who would not recompense it with the most grateful returns. They are naturally frank and affectionate; and, in general, there is nothing but austerity of look and distance of behaviour, that can prevent those amiable qualities from being evinced on every occasion. There are, probably, but few men, who have not experienced, during the intervals of leisure and reflection, a conviction of this truth. In the hour of absence and of solitude, who has not felt his heart cleaving to the wife of his bosom? who has not been, at some seasons, deeply impressed with a sense of her amiable disposition and demeanour, of her unwearied endeavours to promote and perpetuate his happiness, and of its being his indispensable duty to shew, by the most unequivocal expressions of attachment and of tenderness, his full approbation of her assiduity and faithfulness? But lives not he that has often returned to his habitation fully determined to requite the kindness he has constantly experienced, yet, notwithstanding, has beheld the woman of his heart joyful at his approach, without even attempting to execute his purpose?—who has still withheld the rewards of esteem and affection; and, from some motive, the cause of which I never could develop, shrunk from the task of duty, and repressed those soft emotions which might have gladdened the breast of her that was ever anxious to please, always prompt to anticipate his desires, and eager to contribute every thing that affection could suggest, or diligence perform, in order to promote and perpetuate his felicity?

When absent, let your letters to your wife be warm and affectionate. A woman's heart is peculiarly formed for tenderness; and every expression of endearment from the man she loves is flattering and pleasing to her. With pride and pleasure does she dwell on each assurance of his affection: and, surely, it is a cold, unmanly thing, to deprive her virtuous heart of such a cheap and easy mode of gratifying it. But, really, a man should endeavour not only for an affectionate, but an agreeable manner of writing to his wife. I remember hearing a lady say, "When my husband writes to me, if he can at all glean out any little piece of good news, or pleasing intelligence, he is sure to mention it." Another lady used to remark, "My husband does not intend to give me pain, or to say any thing unpleasant when he writes; and yet, I don't know how it is, but I never received a letter from him, that I did not, when I finished it, feel comfortless and dissatisfied."

I really think a husband, whenever he goes from home, should always endeavour, if possible, to bring back some little present to his wife. If ever so trifling or valueless, still the attention gratifies her; and to call forth a smile of good humour should be always a matter of importance.

Every one who knows any thing of the human mind, agrees in acknowledging the power of *trifles,* in imparting either pain or pleasure. One of our best writers, speaking on this subject, introduces the following sweet lines:

> "Since trifles make the sum of human things,
> And half our misery from those trifles springs,
> O! let the ungentle spirit learn from thence,
> A *small* unkindness is a *great* offence.
> To give rich gifts, perhaps we wish in vain,
> But all may shun the guilt of giving pain."

(*To be continued under the heads of Expenditure—Increase of Family—Conclusion.*)

MISCELLANEOUS.

Cotton Wool.

The Manchester Journal says, "the importation of cotton wool this year exceeds the quantity imported during the same period last year by 249,402 bags; the imports for this year being 720,097, and for the same period last year 470,695. [*English paper.*

We find, on perusing some letters from Mexico, that the purchase of land made by Mr. Baring is on the north-east coast, towards the boundary of Mexico and the United States. The extent is in some letters stated at 300 square leagues, which is rather more probable than 300 000. Three hundred square leagues form an area equal to one of our large counties.—*Ib.*

Cotton Manufactures.

The following particulars relative to the extent of the cotton manufactures of this country, are extracted from the second volume, just published, of *Mr. Baine's History and Directory of Lancashire.* The estimate of the total annual amount of cotton goods manufactured, nearly agrees with the one which we have made, though on different data, and it will be seen accords also with official returns.

It is impossible to ascertain with precision the actual amount of any of the great manufactures of the kingdom; but of cotton it may be safely asserted, that the value is from thirty to forty millions of pounds sterling per annum. The average annual amount of cotton wool imported during the last seven years, was 145,000,000 lbs.; from which deduct 15 millions for exports, and 10 millions for cotton wool used at home, in an unmanufactured state, 120 millions remain. Taking the price of this wool at 1s. per lb. and the increase of value by manufacture at five times the cost of the raw material, the amount will stand thus:—

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* Perhaps my reader may think me severe in classing drunkenness with adultery; however, if he takes the trouble of looking for the fifth of Galatians, he will see that St. Paul not only places it with adultery, but with murder.—ver. 19-22.

120,000,000 lbs. of cotton, at 1s. per lb., ...	l. 6,000,000	
Increased value by manufacture, ...	30,000,000	
Gross amount, . .		l.36,000,000
Average value of cotton manufactures exported, ...		16,560,379
Home consumption, . . .		l.19,439,621

This result is not very dissimilar to the statement made by the President of the Board of Trade in the House of Commons, on the 8th of March, 1824, when the cheers of the house so cordially hailed the annunciation that the annual value of cotton goods manufactured had risen to the incredible amount of l. 33,357,000.

Every part of the cotton trade, from the importation of the raw material to its completion by the weaver, the bleacher, the dyer, and the calico printer, is carried on in this town and parish; but the branch for which Manchester is distinguished is the spinning. In this department of the trade, there are at present (August, 1825,) 104 spinning factories in the townships of Manchester, Chorlton-row, Ardwick, Salford, Pendleton, and Hulme, worked by 110 steam engines, of the aggregate power of 3,598 horses. In the year 1787, the number of spinning factories in the county of Lancaster amounted only to 42, and those were in general of a magnitude very inferior to the mills which at present exist in this place.

From a calculation made in 1817, by Mr. John Kennedy, one of the most considerable cotton spinners in Manchester, it appears that the number of persons then employed in the spinning of cotton in this country was 110,763: that the aid they derived from steam was equal to the power of 20,768 horses, and that the number of spindles in motion was 6,645,833. By this immense process 3,987,500,000 hanks of cotton yarn were produced yearly, taking the average at 40 hanks to the pound; and the quantity of coal consumed in their production is stated at 5,006 tons.

Mr. Kennedy's statement for the year 1817:

Raw cotton converted into yarn in the United Kingdom, . . .	110,000,000 lb.	
Loss in spinning estimated at 1½ oz per lb	10,312,500	
Quantity of yarn produced, . .		lb. 99,687,500
Number of hanks, taking the average at 40 per lb.		3,987,500,000
Number of spindles employed, each spindle being supposed to produce two hanks per day, at 300 working days in the year, ...		lb. 6,645,833
Number of persons employed in spinning, supposing each to produce 120 hanks per day, ...		110,763
Horse power employed, equal in number to		20,768

Four ounces and a half of coal estimated to produce one hank of No. 40, and 150 lb of coal per day, equal to one horse power.

The increase of manufactures since 1817 has been considerable, certainly not less than 20 per cent., as will appear from the increased average annual quantity of cotton wool imported.

About four fifths of the whole amount of the cotton trade of the kingdom centres in the county of Lancaster; and it is calculated that the capital employed in Lancashire in this trade alone, in buildings and machinery, amounts to 8,000,000l. Steam, it has been already observed, is now applied to a considerable extent in the weaving as well as in the spinning; and we have ascertained, that there are at present (July, 1825,) in the parish of Manchester alone, upwards of 20,000 steam looms in motion. In the first volume of this work, quoting from Mr. Guest's book on *The Cotton Manufactures*, the number of steam or power looms in Great Britain, were estimated at 10,000: that estimate was even too low, and the probability is, that there are now in England and Scotland not fewer than 40,000 power looms employed in the weaving of cotton alone, 8,000 of which are in Scotland.

[*Bell's Weekly Messenger, London.*

Coal.

There have been many rumours abroad within a few days as to the scarcity of coal, and the advanced price at which it was selling. We have inquired, and from the best authority give the following facts. This year the Lehigh Coal Company had made such arrangements as they expected would enable them to have at market fifty per cent. *more* coal than they had last year. Owing to the drought and consequent low water in the Delaware, the amount of coal in the months of September and October this year, fell short of the amount received in the corresponding months of last year, about 170,000 bushels.

The whole amount of coal which will this year be received from the Lehigh, will not vary much from what was received last year, say 500,000 bushels. We have, however, this season, had an arrival of a pretty considerable quantity of Schuylkill coal, we know not how much, but probably enough to meet the increased demand. The mildness of the winter so far has diminished the consumption. Last week the Lehigh Company received from their mines *twelve hundred tons* of coal. It is a mistake that the Company have made any increase in the price of their coal—they now, as heretofore, sell at $7.33 a ton. Arrivals are daily expected, but as the yards are nearly empty, it must depend upon a continuance of mild weather, whether the Company will be able much longer to receive orders. We recommend to our friends to make immediate application, so as to be early on the order book.

[*Dem. Press.*

[There was, lately, not a bushel of Lehigh coal for sale in this city. We begged half a ton from a manufacturer.]

Sage Plant.

The sage plant grows abundantly in the Island of Crete, and reaches the size of a small shrub. The leaves are collected annually by the Greeks, and dried, to be used medicinally, as an infusion. They are very particular in the time and manner of collecting these leaves, being always gathered on the 1st of May, before sun-rise. The flavour and smell of the Greek plant is much more powerful than the common sage of our gardens.

The most eminent men have been remarkable for their natural infirmities and antipathies. The Duke D'Epernon fell into a swoon at the sight of a rabbit, the Mareschal Albert was taken ill upon bringing a pig to table; Ladislaus, King of Poland, began to run as soon as he perceived an apple; Erasmus became feverish at the sight of fish; Scaliger was seized with a tremor at the sight of water cresses; Tycho Brahe at the appearance of a hare or fox could not support himself, every eclipse of the moon threw Lord Bacon into a fainting fit; Boyle was seized with an unaccountable ecstacy at the sound of water running from a pipe; Le Vayer could not endure the notes of a musical instrument, but felt the most lively pleasure when it thundered; and it is related that an English gentleman fainted as often as he heard read the fifty-third chapter of Isaiah.

SPORTING OLIO.

J. S. Skinner, Esq. *Box, December 16th, 1825.*

Dear Sir.—In some of the "by-gone numbers" of your very useful paper, among other matters relative to the manly, generous and gentlemanly sports of the field, I perceived what may with most of your sporting readers (the number of whom, it appears, is by no means small,) no doubt prove a new and useful addition to their pleasure in shooting. Of course I allude to Mr. Samuel Woodcock's new plan of using "shot cartridges," instead of the old "befouling and tedious process of using wadding made of any material which may first come to hand, as newspaper, tow, leaves, and almost any thing else." It is a fact well known to most sportsmen that many, very many *birds* escape while in the act of reloading, however stanch the dog—and this improvement of Mr. Woodcock will enable us to obviate this difficulty in a great and decisive degree. He says they are worn in a belt of leather buckled round the waist. Now I wish him to inform us of the construction of this belt; whether it has separate divisions for *each cartridge*, and how many it is calculated to hold, and what is the usual length of his cartridge—what the colour of the best cartridge paper, &c?

The plan of using circular pieces of "card" cut out with the "Warden punch," will not be equal to Mr. Woodcock's new plan of "shot cartridges," besides, I think I have observed that the card does not admit of ramming the gunpowder close enough, which is very material to the *full effect* of the blast; so scientific sportsmen say. As regards the plan before us, (and I hope it is capable of being carried into effect,) I was thinking that although a cartridge may be rammed or forced down a coarse musket in a hurry, with a heavy *iron rod*, yet the nice fowling piece with the light wooden rod, would not answer; more especially after a few shots, "which will necessarily call for greater windage every cartridge we *fire*. If too much windage be allowed, we are in danger of losing the cartridge and the explosion will be too lax; if too little, we are unable to force it down with the *light* wooden *gunstick*, and the shot endangers the shooter." I hope Mr. Woodcock will again come forth (when he is not in so great a hurry,) and clear up these seeming difficulties.

Mr Robins, the English mathematician, who was appointed by the king to make experiments on *powder* and shooting, came to the conclusion that the expansive force of powder, the moment it was ignited, *id est*—that is, the expansive force of the gases evolved was equal to common air an hundred times condensed in the condensing syringe, or air gun. This, it must be admitted, is very powerful, and such as is calculated to produce wonderful effects, if *properly* managed. I stop till I hear from Mr. Woodcock.

Scolopax

THE FARMER.

Baltimore, Friday, January 13, 1826.

At a meeting of the Trustees of the Maryland Agricultural Society, held at Lexington, the residence of D. Williamson, jr. Esq. on the 8th Dec. Present,

J. B. Morris, Geo. Howard,
J. Hollingsworth, Geo. Cooke,
H. V. Somerville, Trustees. B. W. Hall,
Jas. Carroll, jr. D. Williamson, jr.
A. Thomas,
J. S. Skinner, *Cor. Sec.*
Jas. Howard, *Rec. Sec.*
Jas. Cox, *Treasurer.*

The committee appointed at the last meeting of the Trustees, reported a scheme of premiums for distribution at the next Cattle Show, (to be held in June,) which was read and being amended, was adopted, as follows. viz.

PREMIUMS FOR 1826.

For the farm of not less than 100 acres, which shall appear to have been cultivated with the greatest economy and *nett profit*, consistently with its permanent improvement; reference being had to its natural advantages as to soil, situation, &c. &c.	$50 00
For the 2d best farm; particulars as above,	30 00

Crops:

For the best 20 contiguous acres of wheat, to be not less than 30 bushels per acre,	20 00
For the best 20 contiguous acres of Indian corn, yield not less than 60 bushels per acre,	15 00
For the best 20 contiguous acres of rye, yield not less than 35 bushels per acre,	12 00
For the best 10 contiguous acres of hay, timothy, clover, rye, or orchard grass, or any of the above mixed—weight to be ascertained at least one month after cutting,	15 00
For the best 10 contiguous acres of wheat, yield not less than 30 bushels per acre,	12 00
For the best 10 contiguous acres of Indian corn, yield not less than 60 bus. per acre,	10 00
For the best 10 contiguous acres of rye, yield not less than 35 bushels per acre,	10 00
For the best 5 contiguous acres of hay, as above,	10 00
For the best crop of tobacco, not less than 5 hogsheads, highest price,	20 00
For the 2d best crop of tobacco, as above,	10 00
To the person who shall raise the greatest quantity of seed cotton within this state,	10 00
For the best acre of potatoes, not less than 250 bushels,	10 00
For the best acre of carrots, not less than 400 bushels,	10 00
For the best acre of mangel wurtzel, not less than 800 bushels,	10 00
For the best acre of ruta baga, not less than 400 bushels,	10 00
To the proprietor of the apple orchard, consisting of not less than 200 trees, which shall evince the most judicious management,	10 00
For the most successful experiment in water-rotting, or otherwise preparing flax or hemp; the quantity to be not less than 50 lbs. dressed—the whole process to be stated, and a sample to be produced,	10 00
	$284 00

Horses and Mares.

For the best stallion, adapted to get stock for the saddle,	15 00
For the best stallion, adapted to get stock for quick draft,	15 00
For the best stallion, adapted to get stock for slow draft,	15 00
For the best brood mare, adapted to the saddle,	10 00
For the best brood mare, adapted to quick draft,	10 00
For the best brood mare, adapted to slow draft,	10 00
	$75 00

Asses and Mules.

For the best jack,	20 00
For the best jennet,	10 00
For the best pair, well broke mules, raised in the state,	15 00
For the best mule colt by the side of its dam,	5 00
	$50 00

Neat Cattle.

For the best bull, over 2 years old, full blood Improved Durham Short Horns,	10 00
For the best bull, over 2 years old, full blood Devon,	10 00
For the best bull, over 2 years old, full blood Alderney,	10 00
For the bull, over 2 years old, of any other breed,	10 00
For the best bull, under 2 years old, of any breed,	8 00
For the best milch cow; certificate of her milking, quantity of butter produced, and keep for one week; and of the interval of time elapsed between her calving and the week of trial to be produced,	10 00
For the best heifer of any breed,	5 00
For the best pair of well broke oxen,	10 00
	$73 00

Swine.

For the best boar, over one year of age,	10 00
For the best boar, under one year of age,	5 00
For the best breeding sow, litter of pigs to accompany her,	10 00
For the best sow pig,	5 00
	$30 00

Sheep and Wool.

For the best Saxony ram; reference being had to the quality of the wool,	10 00
For the best pair Saxony ewes, as above,	8 00
For the best Merino ram, as above,	10 00
For the best pair Merino ewes, as above,	8 00
For the best Southdown ram,	10 00
For the best pair Southdown ewes,	8 00
For the best Dishley ram,	10 00
For the best pair Dishley ewes,	8 00
For the best ram of any other breed than the foregoing,	10 00
For the best pair of ewes of any other breed than the foregoing,	8 00
To the farmer, whose flock at the last shearing yielded the greatest average weight of wool, the flock to consist of not less than 20; the wool of the whole to be weighed, being first cleaned of tags and filth—if fine wool,	10 00
As above——coarse wool,	5 00
To the farmer who shall have raised, the last season previous to the exhibition, the greatest number of lambs in proportion to the number of ewes, (not less than 20,)	10 00
For the best specimen of shearing, (on the ground,)	5 00
	$120 00

Domestic Family Manufactures.

For the best piece of cloth, not less than 12 yards, of any colour; the wool whereof to be raised and spun on the farm of the candidate,	10 00
For the best piece of cassimere, not less than 20 yards, of wool, as above,	8 00
For the best piece of cassinett, not less than 20 yards, as above,	6 00
For the best piece of flannel, not less than 20 yards, as above,	8 00
For the best piece of carpeting, not less than 20 yards, as before,	8 00
For the best piece of kersey, adapted to labourers, not less than 20 yds. as before,	5 00
For the best piece of shirting, of any materials, not less than 20 yards,	5 00
For the best piece of 8-4 linen-diaper, not less than 15 yards,	5 00
For the best piece of 7-8 toweling, not less than 15 yards,	5 00
For the best hearth-rug,	4 00
For the 2d best hearth-rug,	3 00
For the best and handsomest piece of 10-4 woollen counterpane,	4 00
For the 2d best and handsomest piece of 10-4 woollen counterpane,	3 00
For the best pair 8-4 woollen blankets, the wool whereof to be raised and spun on the farm,	4 00
For the 2d best pair 8-4 woollen blankets, as above,	2 00
For the best pair of knit woollen hose, full size,	2 00
For the 2d best pair of knit woollen hose, full size,	1 00
For the best pair of knit cotton hose, full size,	2 00
For the 2d best pair of knit cotton hose, full size,	1 00
For the best pair of knit thread hose, full size,	2 00
For the 2d best pair of knit thread hose, full size,	1 00
For the best straw or grass hat, imitation of Leghorn,	4 00
To the spinners of the greatest weight of cotton, wool, or flax, in 5 hours; for each article, $3	9 00
	$102 00

Implements of Husbandry.

For the best agricultural machine that may be considered new, and as deserving the patronage of this Society,	$10 00

Fermented Liquors.

For the sample of the best cider, the pure juice of the apple,	10 00
For the sample of the best domestic wine,	10 00
	$20 00

Butter and Cheese.

For the specimen of the best fresh butter,	10 00
For the specimen of the best preserved butter, three months old,	8 00
For the specimen of the best cheese, made in Maryland,	8 00
	$26 00

Ploughing.

For the best ploughing by three horses or mules,	10 00
For the best ploughing by two horses, mules, or oxen,	10 00
To each of the successful ploughmen, $2	4 00
	$24 00

For Farms, Crops, &c. - - -	$284 00
Horses and Mares, - - -	75 00
Asses and Mules, - - -	50 00
Neat Cattle, - - - -	73 00
Swine, - - - - - -	30 00
Sheep, Wool and Shearing, - -	120 00
Family Manufactures, - -	102 00
Implements of Husbandry, - -	10 00
Fermented Liquors, - - -	20 00
Butter and Cheese, - - -	26 00
Ploughing, - - - -	24 00
	$814 00

The report was, on motion, ordered to be printed in the American Farmer, and in handbills, under the superintendance of the committee by whom it was prepared.

JAS. HOWARD, *Sec'y.*

☞ The next meeting of the Trustees of the Maryland Agricultural Society will be held at the residence of the Treasurer, on Thursday next, which will be on the *19th*, and not the *20th*, as erroneously stated.

VALUABLE ACQUISITION TO MARYLAND BREEDERS OF SWINE.—A pair of hogs passed accidentally under our notice in their transit to the Eastern Shore of this state, where they were going to Mr. Frederick Purnell, to whom they were presented by Mr. Thorndike, of Massachusetts. They are of Mr Pomeroy's celebrated compound breed, being made up of certain proportions of the Bedford, Bakewell, and Byfield blood—are of small bone and easily fatted. Maryland farmers may have recourse to them after a short time, for the improvement of their stock of swine, and will know how to appreciate the benefit.

☞ THE MARYLAND JUSTICE, a valuable manual for the guidance of justices of the peace, constables, and citizens in matters not within the jurisdiction of the county courts, has fallen under our observation, and we take this opportunity of recommending it to the Maryland farmers generally. It contains, besides several judicious chapters on accounts, distress, debt, &c. a collection of the acts of assembly relating to the jurisdiction and prescribing the process of justices of the peace, the acts of assembly regulating the conduct of constables, and an alphabetical and chronological digest of the miscellaneous acts, properly denominated police acts. This book is highly commended by competent judges; and is, in our opinion, for reference, a convenient volume to any citizen. Price $1.

Prices of American Produce—Liverpool, Nov 28.

The aggregate averages regulating the importation of foreign Grain, were struck on the 15th of November. Wheat 61s 9d, Barley 41s. 4d, Peas 51s 10d per quarter. These averages fix the admission of foreign Barley at [illegible] per qr, and Peas at 7s, all other grains continue prohibited. *Cotton*—(public sales), Orleans 7½a10d ord to good fair, Alabamas, &c. 7½a9d ord to fair, Boweds 7a10½d ord to good, Bowed Sea Islands 9½a11d middg to fair. *Tobacco*—there has been a speculative inquiry for stemmed. *Ashes*—Am Pearls at 32s 3d per cwt. *Turpentine*, 10s. 9d. p. cwt. *Rosin*, 4s. 9d p. cwt.

The quantity of flour inspected in Baltimore in the years 1824 and 1825, viz.

	1824.	1825.
Wheat flour, bbls.	529,568	497,311
Do. do half bbls.	20,664	25,508
Rye flour, bbls.	5,770	2,929
Corn meal, casks,	6,616	7,019
	562,618	532,767

The number of appeals from the judgment or decision of the inspectors of flour.

1824,				
March	25,	An appeal and the inspector's opinion		confirmed
Sept.	3,	do.	do.	reversed.
1825,				
June	30,	do.	do.	confirmed
Aug.	12,	do.	do.	reversed.
Oct.	9,	do.	do.	confirmed.
"	28,	do.	do.	confirmed.
Nov.	23,	do.	do.	reversed.
"	28,	do.	do.	confirmed.
Dec.	7,	do.	do.	confirmed.
"	9,	do.	do.	confirmed.

The amount of auction duties received, and the expense of deepening and preserving the harbour for the last five years, viz.

Amount of auction duties received, viz.		Expenses of the harbour, viz.	
For 1821,	$16,514 99	For 1821,	$20,202 60
1822,	18,572 04	1822,	31,030 63
1823,	22,054 43	1823,	30,485 62
1824,	22,731 03	1824,	22,559 82
1825,	25,981 54	1825,	20,927 18
	$105,857 03		$124,993 85

Of billiard tables.

There are six now in use and regularly licensed.

MAYOR'S OFFICE, *Jan* 6th, 1826.

Amount of inspections in the city of Baltimore during the periods ending as follows, viz.

For three months ending the 5th December.

1,215	large casks domestic liquors.
13,222	small do. do. do.
447	casks foreign do.
706	large casks oil and molasses.
898	small do. do. do.
8,574	kegs butter.
2,557	do. lard.
1,693	bbls. and 12 half bbls. beef.
2,451	do. and 76 do. pork.

For three months ending Dec. 31st.

175,741	bbls. and 8,585 half bbls. wheat flour.
99	do rye flour.
557	casks corn meal
7,273	bbls and 758 half bbls. mackerel.
121	do shad.
5,117	do and 145 half bbls. herrings.
3	do. salmon
1,317	hhds flaxseed for 12 months ending 31st Dec.

EM'L KENT, *Reg*

CONTENTS OF THIS NUMBER.

On Sheep, "Hints for 'Unskilful and speculative men,'" in answer to Columella—Cornelia on Wool and Sheep—How to Test the Value of Root Crops—Contest in Picking Cotton—Culture of Tobacco in Missouri—J. Rice, on the Plum and Morello Cherry—Correspondence of the Pennsylvania Society for the promotion of Internal Improvement, with William Strickland—A Whisper to a Newly-Married Pair, continued—Extent of Cotton Manufactures in England—Consumption of Lehigh Coal—Sage Plant in Greece—Remarkable Eccentricities of Eminent Men—Sporting Inquiry—Premiums of Maryland Agricultural Society for their Exhibition in June next—Valuable Swine—Inspections and Auction Duties in Baltimore—Editorial.

PRICES CURRENT.

ARTICLES.	per	WHOLESALE. from	to	RETAIL. from	to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	33	35		
COFFEE, Java, ...	—	18	19		25
Havana, ...	—	15½	17½	18	20
COTTON, Louisiana, &c.	—	18	19		
Georgia Upland, . . .	—	16			
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33		37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90	1 00		
FLOUR, Superfine, city	bbl.	4 75	5 00	6 00	6 50
Extra . . . . do.	—	5 00	5 50		
Fine, ...	—	4 75			
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	54	57		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	60	84		
do. Red, ...	—	80	85		
do. White Flint, . .	—	2 00			
Rye, ...	—	55			
Barley, ...	—	95	1 00		
Clover seed, Red . .	lb.	4 75		5 25	
Ruta Baga Seed, . . .	bush	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36		
Bean White, ...	—	1 50		1 62	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	29		
HOGS' LARD, ...	—	9	10	12	
LEATHER, Soal, best,	—	26	27		
MOLASSES, sugar-house	gal	45			
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb	7		9	
NAVAL STORES, Tar,	bbl.	1 67½	2 00		
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2 00			
OIL, Whale, common, .	gal.	32	35		
Linseed, ...	—	70			
PORK, Baltimore Mess,	bbl	13 00			
do. Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	6 00	6 12½		
RICE fresh, ...	lb.	3	3½	6	
SOAP, Baltimore White,	lb	12	14	18	
do. Brown, .	—	5½	7½	10	12
WHISKEY, 1st proof, .	gal.	25	27	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37	50	
SUGARS, Havana White,	c.lb.	13 50			
do. Brown, . .	—	10 75	11 00		
Louisiana, ...	—	10 00	11 00		none
Loaf, ...	lb.	19	22	20	25
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	75	80	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	17½		25	
SALT, St. Ubes, ...	bush	45	48		
Liverpool Ground . .	—	50	52	62	
SHOT, Balt. all sizes, .	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 30		
Lisbon, ...	—	1 15	1 25	1 62	1 75
Claret, ...	doz.	4	8		
Port, first quality, . .	gal	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed, but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled,	—	34	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOY, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

FOR THE AMERICAN FARMER.

COLUMELLA,

His errors opposed by facts and the highest authorities established by the Bath Society and the British Agricultural Board.

Columella asserts—American Farmer, December 30, 1825.—"Much is said of the Southdown sheep in England and they begin to attract notice here among speculative men. Their mutton may be good, but I suspect its superiority is owing to the pasture on which they are generally fed, and their extensive ranges, from which with the delicacy of taste peculiar to sheep, they pluck a greater variety of sweet grasses; they being rather a small bodied animal are also better adapted to such pastures than those of heavier bodies, which require more food with less labour in the pursuit of it." He further asserts "and when four or five years old, the ewes almost invariably have no wool on their bellies and they will at that age produce about 1½ pounds of wool each, the wethers 2 pounds or 2½ pounds. They have the lightest fleece of any sheep I have ever seen. * * * * *

"Very good superfine cloth is made of Southdown wool, and is very sufficient for the woollen Manufactories of Yorkshire; and when its improved quality is better known there, it will surely come into greater demand than is the case at present, where the Northern wools are generally used, and the consumption of Herefordshire and Southdown wool is not very considerable."

Communications to the Board of Agriculture, vol. 7, page 380.

Merino wool improved by Southdown cross.

"The *extraordinary* advantages resulting from *the cross of Merino on Southdown,* appeared not only in the parcels of wool of that description, but by the high prices, at which they sold; exceeding the rate of pure Merino in many instances"

"The Farming Society pay a just tribute to the spirited exertions of Dr. Parry, who presented the Society, with a ram from which, on the Southdown ewes of Mr. Grierson, the wool of some sheep of one year old, attained the extraordinary price of 9s. 9d. per pound, unscoured." * * * *

* * * * "The general opinion was, that *a cross from the Merino and Southdown,* if generally established, would be productive of a *superior growth of fine wool.*"

Lord Sheffield's Report to the Wool meeting at Lewes, July 1809.

Report of Samuel Yeates & Son, Monks Mill, on Wool. grown in England by Dr. Parry on Merino Sheep crossed with British Sheep, and on prime Leonesa Spanish wool of the Coronet pile and manufactured by them for the premium of the Bath and West of England Society for promoting Agriculture, Manufactures, &c.

Merino wool crossed made the finest cloth.

"Perhaps we cannot so fully explain to the committee, which wool manufactured best, as by giving the words of the foreman to whose superintendance the making of these two cloths was entrusted. He says, Dr. Parry's wool and cloth in *every state* works much more kindly than the Coronet." * * * * *

"Although perhaps we may be deviating from our sphere in pronouncing which is the finest of the two cloths, yet we feel so fully persuaded that we are only anticipating the decision of the Committee, that we do not scruple to say, that in our opinion as manufacturers, the cloth made with the British wool, and marked in Dr. Parry's name, is decidedly of the finest quality."

Premium taken by woollen cloth afforded by Merinos improved in form by British crosses.

At the Annual Meeting, 1806, the Committee appointed to examine Cloth and Wool, reported as follows: –

"On the whole, they were decidedly of opinion, that Dr. Parry had, by his zeal, diligence, perseverance, and activity, accomplished the grand object of producing, in the climate and soil of Britain, wool equal to that usually imported from Spain; and that in so doing, he merited the warmest thanks of the country in general, and this Society in particular."

Bath Papers, vol. 11, pages 161, 162, 163, 164.

Columella asserts—"It is by no means an ascertained fact that diseased sheep have finer fleeces than healthy ones."

American Farmer, Dec. 30, 1825.

Diseased Sheep have finer fleeces than healthy ones.

"A sheep which is fat has usually comparatively coarse wool; and one which is lean, either from want of food or DISEASE, HAS THE FINEST WOOL; AND THE VERY SAME SHEEP MAY, AT DIFFERENT TIMES, ACCORDING TO THESE CIRCUMSTANCES, HAVE FLEECES OF ALL THE INTERMEDIATE QUALITIES FROM EXTREME FINENESS TO COMPARATIVE COARSENESS."

Parry on Wool—Bath Papers—vol. 11, p. 211.

"Merinos crossed with Ryelands, give finer fleeces and better carcasses.

All those who have procured them from me concur in stating that they produce stock, not only with better carcasses, but with finer fleeces, than the pure Merinoes." * * * *

Idem, page 208.

"It cannot, however, be denied, that both the fleece and carcass of any breed of sheep, either from exclusive and partial attention, or from defective care and judgment, may decline, and become eventually worthless. The Spaniards, from time immemorial, have thought only of the *fleece* of their sheep. The carcass, therefore, is of no value."

Idem, page 216.

Ellman's Southdowns let at from 10 to 100 guineas.

Arthur Young, Secr'y British Agric. Board states in 1813, that—

"Until lately ten guineas was the highest price heard of in Sussex for the sale of any ram; now Mr Ellman lets many of his three years old rams for fifty; inferior ones for thirty, twenty, ten guineas; and he has let at one hundred."

Great product in flesh and fleece.

Southdowns live and dead weight.

	lbs.	oz.	
"Live weight			192 lbs.
Blood	6	00	
Entrails	11	00	
Caul	16	4	
Gut fat	5	0	
Head and pluck	8	12	
Pelt[*]	15	12	
Carcass, next morning			125
Offal			67
			192 lbs

If 192 gives 125, what will 20 give? Answer 13.

Slaughtered the 21st and cut up the 24th of December.

First fore quarter	29	0
Second	28	12
First hind	33	8
Second	32	0
Lost	1	12
	lb. 125	0"

"Had one side cut into joints and weighed.—

Haunch	23	0
Loin	10	4
Neck	12	0
Shoulder	11	12
Breast	4	8
Lost		12
	62	4

The above weighing does credit to the Southdown sheep: the quarters were divided in the usual way, leaving one short rib to the hind, and twelve to the fore.

The hind quarters of this wether were heavier than the fore, which Mr Ellman very justly considers as a merit in the breed, as the former sell at 1d. a pound more than the latter."

Survey of Sussex, 326, 329.

These were Improved Southdowns.

"Southdown wether mutton, in point of delicacy and flavour, is thought equal to almost any that is killed; and in summer, as preferable to some other fine flavoured breeds, especially to Norfolk mutton."

Survey of Sussex, 331.

"Mr. Ellman has generally four men in the water to wash, and pens made in the water, pointing against the stream, so that the thick or foul water keeps draining from the sheep, and particularly where they are. His pens in the water are, the first where the sheep remain about three or four minutes, to soak the wool. In this pen he generally puts about twenty at a time; from which they are put forward to another pen, where the men stand to wash, which is performed by pressing the wool between their hands, after which the sheep swim out against the stream for about fifteen or twenty feet, which cleanses the outside of the wool."

"Mr. Ellman has indeed clipped more than five pounds from several of his own breed."

Survey of Sussex, 352, 354.

"The hardiness of the Southdown, enduring wet and cold lodgings, and a greater degree of abstinence and fatigue than the Norfolk in the fold, is a superiority of much moment; and only to be equalled by another, which they possess in a very superior degree, which is that of doing well upon coarse sour pastures."

Survey of Essex for the British Agricultural Board, vol. 2, page 310.

"Mr. Coke's flock of 160 New Leicester ewes, produced in 1802, 100 lambs; his flock of 630 Southdowns, produced 830 lambs, living in June."

Complete Farmer, 4to.

Hardiness and close fleeces of Southdown's—Good Form, essential to good properties.

"If we examine them when feeding in the same field, those that are well formed and covered in a fine and close fleece will have much the advantage, in a pinching season of others that are worse made; and sheep having a disposition to do kindly, and be in good order and fat, is a circumstance next to none. In all these respects the Southdown breed is unexceptionable.

Mr. Ellman's annual losses have been for some years, about one in an hundred, exclusive of lambing time; and other flocks are nearly upon a par with him. The natural soundness of the Down, unquestionably renders the breed, that feeds upon these chalk hills, peculiarly free from internal distempers; and their hard and close coats, are an excellent preservative from external ones. in these respects, they are well defended against accidents; boisterous winds blow over these high hills in winter and spring, with a violence that more level countries are free from; exposed to the fury of the elements at the extremity of the Island, which do incredible damage to the houses, corn, &c., without a fence or a tree of any kind, for vegetation is cut by the fury of the winds. It must be a hardy breed to weather such storms."

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[*] Washed the pelt and clipped 5 pounds of wool when dry.

Skin weighed 5 lbs. 8 oz. loss by washing 5 lbs. 4 oz. This great loss may be accounted for by the pelt being thrown under the sheep to receive the blood, &c.

Survey of Sussex, page 300.

Good Properties of Southdowns.

"In Wiltshire, as in many other counties, the Southdown sheep are more frequently fed than any other. They are something smaller than the before mentioned. On high lands they have exemplified that they are by far the most profitable, as the feed of two Wiltshire sheep will do fully for three Southdown, and three Southdown, (though much smaller) will cut more wool on an average, than two Wiltshire, and which is of a better quality, and consequently commands more money.

"When they come to be grazed and fattened for sale, they will weigh from eight to nine stone each;* also they are worth eight pence per stone more in Smithfield market than larger sheep. They will be quiet to feed, and stand folding and the winter well."

Experimental Farmer, page 124.

Southdowns admirably calculated for bleak and bare situations.

"The Southdown breed of sheep was introduced upon the Wolds a few years back, and is gradually extending itself. It is a species admirably calculated for bleak and bare situations, where they have to travel far for a supply of food, and where the bite is short. They are healthy and active, of smaller size than the sheep of the wolds, less subject to several disorders, and admitting of more numerous stocking, in at least the proportion of one to six. There is one flock of upward of five hundred, and four or five other smaller ones. The value of their fleeces has always individually equalled, and in some years considerably exceeded, that of the long woolled breed."

Strickland's Survey of the East Riding of Yorkshire, 1812, page 282.

Southdowns—Flesh is of excellent flavour—wool not much inferior to Spanish.

"This breed (Norfolks) however is on the decline, and seldom kept, unless where the folding system is retained, being supplanted by the Leicesters and Southdowns, both quicker feeding animals, and the latter yielding wool of a quality *not much inferior to what is imported from Spain.*

Their flesh is fine in the grain, and of an excellent flavour."

Brown on Rural Affairs, vol 2, pages 226, 227.

Form essential in the selection of Sheep.

"Choose the handsomest sheep possible, but never neglect the coat or fleece." * * * *

Practical Remarks &c., by J. Colans. Bath Papers, vol 9, *page* 114.

Southdowns sufficiently large.

"The Southdowns support a much greater weight of flesh than we see upon land in any part of England of the same value. Although it is a small breed, not averaging more than eighteen or twenty pounds per quarter, yet we have various instances of their weighing much heavier, up to 39 pounds per quarter."

Survey of Sussex for the British Agricultural Board, page 293.

Southdowns docile, hardy and easily kept.

"Those who keep them say, that they live so much hardier, and feed so much closer, that they can keep three hundred *well* on the same land that would only keep two hundred Wiltshire sheep: that they are more docile, will feed more contentedly, and stay more quietly in the fold."

Report of Wiltshire.

"They are full of wool, and that wool commonly very fine." *Report of Wiltshire.*

Southdowns well formed—open and deep breasts.

"The shoulders are wide; open breast and deep; fore and hind legs stand wide; they are round and straight in the barrel; broad upon the loin and hips; shut well in the twist, which is a projection of flesh in the inner part of the thigh, that gives a fullness when viewed behind and makes a Southdown leg of mutton remarkably short."

Survey of Sussex, page 296.

Spanish sheep crossed with Ryeland or Southdown proved equal to the whole breed of Spain.

"The intelligence of our breeders will soon, by crossing, bring the sheep to such form as we deem more perfect; and it seems proved that the wool of the Spanish, crossed on Ryeland and Southdown, is fully equal to the whole breed of Spain."

Communications to the Board of Agriculture, page 401.

PENNSYLVANIA AGRICULTURAL SOCIETY.

Extract from the proceedings of the Pennsylvania Agricultural Society, at their third annual meeting held at Prospect Hill, in Philadelphia county, on the 19th, 20th, and 21st of October, 1825; with the Address delivered by William Darlington, M.D.

After having witnessed the success of their efforts, not only in the extent of the exhibition, but in the interest manifested by a vast assemblage of respectable farmers, the Society heard from Dr. Darlington, an ingenious and instructive address; and adjourned to the Red Lion, to receive Mr. Sergeant, Mr. Hopkinson, Mr. Walsh, Mr. Ingham, Mr. Brent, Mr. Barnitz, of York, the members of the Legislature from the city and county, and other gentlemen whom they had invited, to honour them with their company at dinner.

[The official account of the exhibition has been published in the American Farmer. We have been waiting for an opportunity to insert Doctor Darlington's address, which follows.—Ed Am. Far.]

ADDRESS.

Mr. President,
and Gentlemen of the Pennsylvania
Agricultural Society,—

I should certainly have shrunk from the task of attempting an address to this respectable association, on the subject of their pursuits—a subject on which every member, probably, has more practical information than myself—but that I esteemed it an imperative duty to contribute my mite towards promoting the views of the Society, in any mode which they might be pleased to designate. I can only regret that they have not been more fortunate in their selection, on the present occasion. I will say, however, that if an ardent zeal in the cause of the Institution,—an honest pride in the character of our intelligent farmers, quickened by a jealousy of every circumstance which can affect the interests or high standing of the Agricultural community,—and an earnest desire to see the cultivators of the soil, generally, as distinguished for their enlightened attainments in their profession, as they are for their patriotism, and correct deportment as citizens,—if these attributes may conciliate your indulgence for the deficiencies and imperfections of the address, I feel that I may safely claim, for a few moments, your candid and favourable attention.

I shall not presume, at this time, to undertake a dissertation on the practical details of husbandry, nor to edify you with precepts concerning the most approved systems of rural economy. These subjects have been discussed, with signal ability, by the gentlemen who have preceded me, at our former meetings; and will, no doubt, be the theme of many instructive discourses, on future occasions. My purpose is, simply, to notice some of those considerations, which I conceive ought to stimulate our patriotic farmers to increased exertions for the acquisition and diffusion of useful knowledge; and thereby, as a necessary consequence, to promote the interests, and enhance the dignity of the profession. It will not be denied, notwithstanding the advances of modern husbandry, that we have ample room for further improvement in the *practical operations* of the farm; and that we have much to learn relative to their *true theory*,—or, in other words, those laws, or principles of causation, which govern the processes connected with successful culture. That it is desirable to effect this improvement, and to acquire a knowledge of those principles in nature, of which we may advantageously avail ourselves in our labours, every rational mind will admit. To promote these objects, no mode seems more eligible than that which we have adopted, in the formation of this Society. By the agency of such institutions, detached facts, and the insulated experience of individuals, may be brought together into a common fund, producing mutual and augmented benefit,—conflicting opinions may be compared and corrected,—and the scattered rays of truth made to converge into a pencil of light, that will at once trace and illuminate the paths of genuine Agricultural philosophy. The importance of liberal associations, in promoting and disseminating useful knowledge, has long been understood by those who are devoted to science, and the arts. Our philosophical societies,—our academies of science,—and our mechanic institutes,—are striking illustrations of this fact: and it is gratifying to know that our intelligent farmers are beginning to perceive, and to appreciate the value of such institutions, in reference to their own pursuits. The benefits diffused by the laudable exertions of our elder sister the Philadelphia Agricultural Society, are gratefully acknowledged, not only in our own state, but throughout the Union; and I am sanguine in the hope, that we shall successfully emulate her honourable career. I am confident that the intercourse of our distinguished farmers, at our annual meetings, will not only be the means of improving the various kinds of stock, and promoting more correct views of rural economy,—but that it will also subdue those prejudices, which are entertained by many, in relation to every thing *new*,—or with which they are unacquainted. It is a frequent, and I apprehend, a well founded observation, that while those engaged in the arts and manufactures, are prompt to avail themselves of every invention and device that will facilitate their labours, and advance their interests,—the cultivators of the soil are too apt to be jealous of innovations upon established practices, and are remarkable for the tardiness and reluctance with which they adopt, or countenance new improvements. This characteristic is unquestionably owing, in great measure, to their retired habits; and to the want of that liberal intercourse with each other, which meetings like this are so well calculated to promote. It is under such cir cumstances of privation, that prejudices get possession of the mind, and become extremely difficult to be eradicated: But it will be found that a proper culture, is as beneficial to the intellect, as to the farm; and that the prosperity, as well as the respectability, of the farmer, will ever be in a direct ratio with his intelligence. I never can believe that the pursuits of Agriculture are incompatible with general knowledge, or scientific attainments: for, although it was intimated, in ancient times, that wisdom was inaccessible to him *who held the plough,* and *whose talk was of bullocks,* yet the passage was long since received as *apocryphal,* and the suggestion abundantly refuted by experience. *We* have seen, and have profited by, the wisdom of the holders of the plough. We have seen our practical agriculturists "sought for in public council"—we have seen them "sit on the judges' seat"—and, so long as wisdom and patriotism shall be esteemed amongst us, our country will hold in grateful reverence, the memory of the Farmer of Mount Vernon.

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* The country stone is 14 pounds.

It is, nevertheless, to be lamented, that there should be those yet amongst us, who undervalue the aids which science proffers to the labours of Agriculture; and who persist in degrading the profession to a mere blind routine of manual drudgery. The investigations of the chemist and the naturalist are denounced, by such, as unprofitable speculation, idle theory, and *book-farming.* It is curious to observe what a bugbear *theory* is, with many who plume themselves on being sagacious, practical farmers. No doubt there have been wild and extravagant notions indulged by those who were deficient in facts and knowledge—and what science has not had its absurd theories?—But a moment's reflection will teach us that this is no argument against theory. Sound theory is nothing but a true explanation of the causes, and modes, by which effects are produced. There are certain laws which control and regulate every process in nature; and to comprehend those laws correctly, is to possess the true theory of the process. Is this an acquisition to be despised? Or will any one pretend that all theory can be discarded? On the contrary, it is certain, that there is no man—not even the most prejudiced, plodding disciple of empiricism, in any profession, who has not his theory, such as it is. It is impossible for a mind possessing intelligence enough to observe a succession of phenomena, or series of connected facts, not to form some theory, however imperfect, of the laws, or modes of causation: and I venture to affirm, that the facts themselves will always be most carefully ascertained by those who seek to understand the principles which govern them. Few things are more abundant than *false facts,*—or assumptions purporting to be facts: and none are so prone to adopt, and be misled by them, as those who disdain to theorize, or investigate. If these views are correct, it becomes our interest, as it should be our pride and ambition, to apply them judiciously to the business of the farm. We should endeavour to qualify ourselves to observe with accuracy—to scrutinize facts, and make legitimate deductions. If those who have preceded us, have observed negligently, or reasoned incorrectly, and thereby advanced absurd theories,—let it be our province to rectify their mistakes. The explosion of an old error, is scarcely less valuable than the discovery of a new truth. It surely will be admitted, that there is a true solution for every phenomenon in nature; and if, as is alleged, the book-farmers have led their brethren astray by erroneous theories, let it be our business to detect the fallacies, and expose the errors of their works. Let those who delight to rail at the absurdities of Agricultural writers, distinguish themselves by the more noble and profitable employment of promulgating sound doctrines. Let us all commence our labours by collecting a fund of carefully ascertained facts, in every department of our profession; and then proceed cautiously to the explanation.

A complete qualification for this, requires some preparation, it is true: but it is in the power of every man to make valuable contributions for that object. Every intelligent farmer has observed facts, and acquired information by experience, which, if communicated, would throw light upon the process of Agriculture. To understand those processes intimately,—or, in other words, to be able to theorize correctly—would doubtless, as before observed, require some preliminary scientific attainments:—for Agriculture is, in reality, a comprehensive system of natural science—embracing a knowledge of *Mineralogy, Chemistry, Botany,* and *Zoology.* A knowledge of these, however, sufficient for practical purposes, and to enable us to proceed understandingly, is by no means so difficult to acquire, as is generally supposed; and ought to constitute an indispensable part of the education of youth. With such qualifications,—which every man may possess, with a little industry,—the labours of the farm become a source of delightful instruction, as well as of profit. Every process in the annual routine of husbandry is more or less connected with those auxiliary sciences; and thereby becomes a legitimate object of philosophical inquiry. If we would ascertain the true character and composition of the soil,—determine which of its constituent parts are superabundant,—and what earths require to be added, to ameliorate its quality,—we must call in the aid of *Mineralogy.* A knowledge of this science is implied in every successful investigation of this important branch of Agriculture: and the extent in which it is possessed will generally determine the degree of success with which the inquiry is prosecuted. It is a knowledge of which every man possesses more or less, although he may not be aware of it,—as Molier's *Bourgeois Gentilhomme* had all his life conversed in *Prose,* without knowing it! Every farmer knows that an excess of clay may be corrected by the addition of sand—that an undue proportion of sand requires the admixtion of aluminous earth, &c. to fit it for the successful culture of plants;—and experience has taught us all, that calcareous earth, or lime, is a most important ingredient in the formation of a good soil. These circumstances, as already remarked, are connected with mineralogy; for he that can distinguish the various earths that enter into the composition of the soil, and determine their relative proportions, is something of a mineralogist,—and is *so far* qualified to avail himself of the aids of that science in the prosecution of his labours. It is, then, apparent, that *a portion* of the science is indispensable to the Agriculturist who would succeed in his pursuits. May we not safely infer, that an *additional portion* would enable us to carry our improvements to a greater extent—to augment the productiveness of our lands,—and add the pleasures of intelligence to the enjoyments of profit?

The interesting science of *Chemistry,* so universally and intimately connected with the arts and manufactures, is not less important in the business of Agriculture. It is, indeed, an indispensable auxiliary in the pursuit of mineralogical science; and necessarily enters into every investigation of the constitution, and qualities of the soil. By its aid, we learn the presence or the absence, of those ingredients which experience has shown to be injurious, or beneficial, to the growth of vegetables; and it enables us to correct, or counteract, such as have been found to be pernicious. The entire system of preparing manures, and applying them with the best effect,—the ascertaining of the comparative values of agricultural products, as food,—and, in short, the laws which control the affinities of matter, and regulate the various processes of the field, the farm-yard, and the kitchen, are all legitimate objects of chemical science. How important then, is it, that we should avail ourselves of the lights which it affords, and be enabled to conduct our operations upon rational, and intelligible principles, instead of groping our way, at random, in empirical darkness! To the labours of Sir Humphrey Davy we are indebted for a lucid and successful application of chemistry, to the pursuits of Agriculture. His happy genius has not only carried the torch of science into the workshops of art,—but has cheered, with its light, the dreary caverns of toil, in the bowels of the earth,—and extended its beneficent radiance to the operations of husbandry, which adorn its surface.

Among the accomplishments of the truly enlightened Agriculturist, a knowledge of the rudiments, or fundamental principles of *Botanical* science, deservedly claims a place. By the aid of Botany, in the just and comprehensive meaning of the term, we not only learn to know, and to distinguish plants from each other,—but we become acquainted with all the habits, functions, and properties of vegetables;—and all those circumstances which interest us in their culture,—their influence on surrounding objects,—and their utility to man, whether as articles of food, raiment, or medicine. It furnishes us, in fact, with a key to the simple, yet admirable system of order, which nature has observed in all her works—but more especially in the arrangement, or classification of living, organized beings. The elements of this science,—which are within the reach of every person of common capacity,—will instruct us in many truths which are important in the economy of the farm, and the garden; and will also rid our minds of some prejudices which have descended to us from the ages of darkness and credulity. They will teach us, that upon all created objects, endowed with organic life, Omnipotent Wisdom has impressed certain permanent distinctive characters, by which their individuality is preserved; and consequently, that the strange conceits which still infest some of our brethren, relative to the *transmutation of plants,* are as unfounded in fact, as they are repugnant to reason. We shall learn, indeed, that *species* may be improved by culture—(for that is a very material object, with the judicious farmer,) and also, in some few instances, that those nearly allied to each other may commingle: but we shall find that the notion of a *generic,* or even of a *specific transformation,* in the botanical character of any plant, is so preposterous,—so completely at variance with the established laws of nature,—that its existence can only be accounted for by tracing it, through the obscure channel of tradition, to the unenlightened age in which it originated. The prevalence of prejudices such as these, is not merely injurious by leading the farmer to overlook the true mode in which pernicious, or unprofitable vegetables are propagated; but it exerts an unhappy influence on the mind—substituting credulous indolence for philosophical inquiry—and thereby retarding our progress in the career of improvement.

Zoology, or that branch of science which treats of animated nature, is also an useful and important acquisition to the Agriculturalist who would be master of his profession: for his pursuits necessarily comprise a degree of knowledge, more or less extended, of each of the three great divisions of the material world—the mineral, the vegetable, and the animal kingdoms. Without dwelling on the value of our domestic animals, or the skill and attention requisite to procure an improved stock--a subject of immense interest to the farmer,—and in relation to which a distinguished member of this Society has afforded an example of successful zeal, and liberal enterprise, as honourable to himself, as it has been advantageous to his country,—without, I say, enlarging upon this fruitful topic, it will be sufficient for my present purpose to advert to a single subdivision of the science, termed *Entomology,*—or that branch of Zoology which treats of *insects.* A more intimate knowledge of the characters and habits of those destructive myriads, which invade every department of our labours, and often blight our fondest hopes, is exceedingly desirable: for it is only by such knowledge that we can successfully contend against their ravages. The obstacles presented by unfavourable soils, climate, and seasons, are but trifling impediments in the way of our prosperity, compared with the havoc committed by insects, in the various stages of their existence. Frequently, after devoting the greatest care and attention to their culture, we are doomed to see our choicest fruits, our most valuable crops of grain, and, sometimes, even the herbage in our pastures, ruined and swept away by the devastations of those formidable invaders. Against such multitudinous foes it is vain and futile to wage a direct warfare. It is by a scientific acquaintance with their history,—an intimate knowledge of their habits,—that we are to check their multiplication, or avert the mischiefs which they perpetrate. Some signal instances of the benefits to be derived from this knowledge, are recorded in the annals of science; and are familiar to every naturalist. We have, in some measure, availed ourselves of it, in the processes of Agriculture. We have ascertained that certain modes of culture, certain seasons for ploughing and sowing, the introduction of certain varieties of grain, &c., will interfere with the propagation, and prevent some of the ravages, of those destructive enemies. But much remains yet to be known, to enable us to obviate, completely, those ruinous and vexatious evils: and whoever shall contribute towards the accomplishment of so desirable an object, will be entitled to the lasting gratitude of the Agricultural community.*

If he who caused two blades of grass to grow where but one grew before, was esteemed superior to all the warriors and statesmen who had defended and adorned their country,—what should be the honours awarded to him whose discoveries would enable us to guard our harvest fields from devastation, and secure the delicious fruits of our orchards, our vineyards, and our gardens? Surely, the knowledge that could accomplish this, would be worthy of the most strenuous efforts to attain: and I am convinced it never can be fully attained, without the aid of those lights which are afforded by natural science. Hence it is, that I have ventured to invite your attention, to subjects which have been too much neglected, not to say despised, as being thought idle, and unprofitable, by a numerous portion of our farmers. Although they possess information, more or less extensive, in every branch to which I have adverted,—yet from the want of those aids afforded by the elementary principles, and the lucid methods of scientific arrangement, their progress is difficult,—their theories, or deductions, are vague and unsatisfactory,—their experience is frequently unprofitable, both to themselves and to others, and the success of their operations wholly and necessarily fortuitous.

A new era, however, is happily dawning upon us. Some of our most enterprising, and successful farmers, are distinguished by their acquirements in every branch of science which has relation to Agriculture. They have demonstrated the important truth, that liberal attainments are not only compatible with practicable farming, but that they contribute essentially to elevate the profession to its legitimate rank in the scale of human pursuits. It is to such men, chiefly, that we are indebted for the Agricultural Associations, which have recently been formed in various parts of the United States, and from whose agency we may fairly hope for the most beneficial results. In aid of their labours, there have also appeared several valuable Agricultural Journals, diffusing light and knowledge throughout the land: amongst which, it may be permitted to distinguish one, which has so honourably distinguished itself, by the zeal and ability with which it has advocated our best interests, under the appropriate title of *The American Farmer.*

Seeing, then, that our most intelligent and prosperous Agriculturists sustain, by their example, the positions which I have assumed, I trust their importance will be correctly appreciated by those whom I have the honour now to address: and that every allowance will be made for the cursory and imperfect manner in which my views have been presented. Entertaining, as I do, the highest veneration and respect for the character of the *Independent Farmer,*—my only object has been to show, that it was due to himself, and to his profession, to avail himself of all the lights which science can impart, and to keep pace with the rapid strides of general improvement, in this improving age. I consider it all important that our *American Agriculturists* should be duly informed in every department of useful knowledge—not merely that they may secure the prosperity, and sustain the dignity, of their immediate profession—but because I view an enlightened Yeomanry as constituting the best hope of the Republic, and the surest guarantee for the duration of its freedom: For if ever the flame of Liberty shall, unhappily, be extinguished in our country, there is nothing hazarded in the prediction, that the last scintillations of the celestial fire will be observed among the intelligent cultivators of the soil.

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* It is but justice here to state, that we are under great obligations to our fellow citizen, Mr. Thomas Say of Philadelphia, for his elegant illustrations, and scientific researches in Entomology, as also for the patient and persevering industry with which he continues to prosecute his inquiries in that interesting department of Natural History. Mr James [illegible], of Bucks county, a highly intelligent member of this Society, has likewise directed his attention to the subject, and has set an example of practical investigation into the habits of insects, with a view to counteract their [illegible] which entitles him to our best thanks, and is worthy to be imitated by every enlightened farmer in our country.

SHEEP.

Dear Sir, *Brokenstraw, Warren county, Pa.*

In one of your late papers I observe an editorial notice of the comparative value of the Saxon and common Merino sheep. Your observations relative to the great advantage which will result from crossing our sheep with the Saxons, are undoubtedly correct. As you have samples of wool of the Saxon bucks in your possession, I will enclose you a small sample taken from one of my young bucks, descended, as my sheep generally are, from a Rambouillet ram, imported many years since by Mr. Dupont, of Delaware. On comparison, you will find it to be very nearly equal to many samples of *fine* Saxon wool. I may, perhaps, be wrong, but from comparisons which I have made with Saxon wool, imported into Philadelphia, and which sold for $1 60 per pound, I should pronounce it superior. Yet I am confident that if all our wool was of equal quality, and we were to bring it into the market as American Merino, it would not command more than half of the above price. I have known several persons who professed themselves judges of wool, deceived, and who gave preference to the American over the Saxon samples. After handling, the only true test is the quarter glass. I also enclose a specimen of Saxon wool, said to have been sold at New York for $3 25 per pound, and which was stated to be cheap, inasmuch as the cost of manufacturing a yard of fine cloth that will sell for $10, little exceeds that of cloth which will not command more than $5 or $6 per yard.

In a letter from Count Lasterie to a gentleman in Paris, relative to sheep, there are some remarks on the Rambouillet and Saxon sheep, which I have taken the liberty of translating and sending to you, under the impression they contain information that may be valuable to the wool growers.

EXTRACT.

"The Rambouillet flocks, and most all those of France, have inferior wool to most of the Saxony, and that of the flocks of Naz, which now begins to enjoy the reputation they merit. The reason of this is, that at Rambouillet, and after its example, in most parts of France, they give too abundant and succulent nourishment—in such manner that they have made them much fatter and larger than the race which came from Spain. By these means the wool has become more abundant, but not so fine as that of Saxony, or as that of Naz. These last are from sheep imported from Spain; but the proprietor, Mr. Naz, has had the good judgment to give only as much nourishment to these animals as would keep them in good condition (*bien ventretenir,*) and has taken great care in selecting the animals destined to propagate the species. It is thus that he has succeeded in preserving the *small* race, and to have wool which, in commerce commands a price equal to that of Saxony." He afterwards goes on to state, that those who wish to improve their flocks "ought to prefer sheep from the flocks of Naz, or those of Saxony. The first cannot be had for less than 500 francs each; for the Germans have carried off a number at that price, and propose to buy more."

I stated, in a former communication, as the result of my experience, that the poorest sheep, in point of flesh, gave the finest wool at shearing. I think it is impossible to combine in the Merino, a large carcass and very fine wool; and we will find that, as the wool improves, the animal decreases in size. The increased value of the wool, and the circumstance of their requiring less to keep them, are indeed great inducements for us to go to some little expense in the procurement of good rams.

Very respectfully, yours,

WM. A. IRVINE

John S. Skinner, Esq.

CULTURE OF TOBACCO IN OHIO.

Extract of a letter from A. Dowan, *Esq of Zanesville, Ohio, to* George Lewis, *Esq of Moncey, Pennsylvania, dated 7th Dec.* 1825.

There is a new business just started here, to a prodigious extent and of great promise, the raising of light or yellow tobacco. Present prices are from $6. to $10. per cwt. and from seven to nine cwt. are raised on an acre. Of its continuance I am doubtful, and of the business very ignorant. It is peculiarly fitted to our light thin rolling warm oakhill soil, and such as your small back lots at the Bowling Green. The profits of the crop last year were beyond all example. The farmers netted from 50 to 100 dollars an acre, clear profit. Maryland will be entirely outdone in this business by us. One half of our farmers are engaging in it. But should this branch be over done, of which there appears to me great probability, it will have this great and good effect, of vastly stimulating industry, and of greatly extending the amount of productive real estate in the hilly parts of Ohio. As it would now seem, it will bring more *money* into the state than all our contemplated publick improvements taken together. There is a general tobacco mania. Labour is in demand, and rising in consequence of it. Our merchants are now giving from $6, to $10, per cwt. for the growth of this season, and paying cash. When in Baltimore I saw Mr Payson, and other intelligent merchants, who gave the most encouraging information about pursuing the business. Now our farmers, instead of spending their winter in torpor, idleness and ruin, will be as industriously engaged in grubbing and clearing as in the rest of the year. This will increase the amount of the value of the annual industry of a whole people to a prodigious degree. But, as I before said, it is an experiment, so far as I know; and I am ignorant of tobacco, and tobacco markets I only state the common talk and the prospects. It is almost too good a boon to expect that the present prices of this kind of tobacco will continue. Some raised here last year brought $40 per cwt., and a great part $15 and $18. The freight to Baltimore (*the only market*,) was but $2 per cwt., and less; yet our most intelligent, prudent men, are preparing to raise next year from 4 to 40 acres each—some talk of still more. It must be entirely new land, and that bears but two or three crops.

I heard of you from our commissioners, that you make great efforts to aid and befriend them. Our canal business has progressed with a success beyond all expectation. Provisions and labour low, as well as wages; labourers in plenty, and the seasons most propitious even to this day. Every thing has conspired to aid us, and the heavens have smiled on our great undertakings.

Respectfully, yours, &c.

A. DOWAN.

TO COTTON PLANTERS.

[The Editor asks the favour of an answer to the following queries:]

Eastville, Northampton co., Va, Jan. 2, 1826.

Mr. Skinner,

Having received orders from several gentlemen for my "cotton planter and cultivator," I should feel indebted to any of your correspondents to the South for information as to the proper quantity of seed to be deposited in one spot. It is to be understood that the machine can be constructed so as to drop the seed at any required distance from 3 to 30 inches, and in any quantity from 10 to 100 seeds in a spot. I should like to know, therefore, what quantity would be preferred, so as to ensure a sufficiency and yet not use them too profusely. An early answer would much oblige,

Yours, &c. F. H. SMITH.

COTTON—INQUIRY.

EXTRACT TO THE EDITOR, DATED

Head of Chester, Jan. 2, 1826.

"If you would ask Mr. F. H. Smith, through the Farmer, how they gin their cotton, you will oblige a great many inquirers on the subject.

"There appears to be many disposed to try this new crop on a small scale if it can be readily cleaned.

"I will try a small quantity, but I have no confidence in it, as I am afraid of the frost."

RURAL ECONOMY.

Mr. Editor, *Albany, Jan.* 4, 1826.

In my reading, I occasionally make notes of such facts as are likely to be of future use to me in my farming and gardening, either for the purpose of impressing them stronger on my mind, or to be enabled to refer to them more readily. To these I sometimes subjoin such observations as my practice or reflections suggest. I propose to send you, occasionally, a sheet of these notes and observations. They will tend to show the utility of science in rural economy—to stimulate men of leisure to extend the knowledge of this usefulness, and to benefit the mere practical reader.

Your obed't serv't, J. B.

Grafting Clay.—The British nurserymen use, in grafting, a compound of clay, fresh horse-dung and chopped hay; the horse-dung constituting a fourth part. The mass is intimately mixed with water, and beaten with a stick, or spatula, two or three times a day, for at least a week, to render it ductile, taking care that it shall not be so tough as to crack in dry weather.

The French and Dutch make their grafting clay one half fresh cow dung, and one half fresh loam, intimately incorporated. See *En. of Gard.* p. 441.

Remarks.—The uses of grafting clay are to prevent extravasation of the sap, the drying of the wood, and the introduction of water to the wound or cleft. Both the preceding compositions, properly prepared, are efficient. Indeed, fresh cow dung is alone one of the best applications I know of to the wounds of trees. I have applied it successfully, with bandage, to the trunk of a tree from which the whole circle of bark had been taken off ten inches; and I have found it equally efficacious to the crown and limbs, in cases of amputation and bruises. It should be applied immediately after the wound is made. But the objection is not to the materials, but to the trouble of preparing and applying them. I can recommend, from thorough experience, the following grafting composition, as being superior to either. Take one part of tallow, two parts of bees' wax, and four parts of rosin. Melt the whote together; turn the mixture into water, and work it in the hands as the shoemaker does his wax to incorporate the parts. The warmth of the hand will soon bring it to a proper consistence when wanted for use, and a little grease will prevent its adhering to the fingers. A small piece is broken off, flattened in the hand, and covered over the cleft or wound. If of the thickness of a shilling, it will neither melt, crack or peal off.

Food of Plants.—Giobert mixed together lime, alumine, silex and magnesia, (the earthy constituents of all soils,) in such proportions as are generally to be met with in fertile soils, and moistened them with water. Several different grains were then thrown into this artificial soil, which germinated indeed, but did not thrive, and perished when the nourishment of the cotyledons was exhausted. *Loudon's En. of Gard.* p. 201.

Here is an evidence that the seed of the vegetable, like the egg of the animal, affords nourishment sufficient, and only sufficient, to develop the embryon. The experiment would have been more satisfactory, and would have determined the efficiency of the atmosphere, as it did of mere earths, in yielding vegetable food, had seeds of the most succulent plants, say of clover, been sown, and the earth frequently stirred, so as to give it free access to the roots. But it establishes one very important fact, that the fertility of a soil (other circumstances, such as moisture, temperature, &c. having their weight,) is in the ratio of the vegetable and animal matter combined with it; and that without some portion of these, in a soluble state, it is a mere *caput mortuum*. How important is it to know the quantity of vegetable food in our soils—and to husband it and increase it by judicious management.

Wheat soil.—Grisenthwaite (*New Theory of Agriculture*, 1819,) was the first to generalize the fact of peculiar substances being found in plants, in addition to the common elements of oxygen, carbon, hydrogen and nitrogen. "Elements of primary principles," says he, "admit of no alteration, but as regards magnitude and figure. Hence, when one substance is designed to be transmuted into any other substance; as sugar, by fermentation, into alcohol or acetic acid, or manure into grain, it is obvious that the elements of the second must necessarily be contained in the first; for if they be not, the transmutation cannot take place. This will render it evident that a knowledge of the elements or constituents of bodies, which are intended to be changed into each other by certain processes, should be previously possessed, in order that the process may be conducted with a probability of success."

"To illustrate the preceding reasoning, the wheat crop may be selected with considerable advantage, as it is that which is not only the most important to the interests of mankind, but because the presence of particular substances in it are better known and more generally acknowledged. If we examine the straw of wheat, we shall find it composed of what may be considered common vegetable matter, or of matter composed of oxygen, hydrogen and carbon, with a small quantity of carbonate of lime; so also, if we examine the constituents of the grain, we shall find them distinguished into starch and glutin: and if we carry our researches still farther, we shall find that the elements of starch are precisely the same with the elements of common vegetable matters; but the elements of glutin will be found analogous to those of animals; or, in addition to oxygen, hydrogen and carbon, there will be found nitrogen. The production of this nitrogen, as has been already observed, cannot be effected by mere common vegetable matter; and, therefore, the manure employed in the production of the straw and starch, could not produce the glutin also. If the presence of glutin were accidental, or the value of the flour did not depend upon it, then little care need be taken to provide for its formation; but as it is required to be constantly present, and the value of the flour does essentially depend on it, therefore provision ought to be made for it. In quantity it is not inconsiderable, but it composes nearly one-third part of the grain. That the operations of husbandry, as regards wheat, should be conducted without any reference to this peculiar substance, is very remarkable. That the failure of crops has never been ascribed to its deficiency, is still more wonderful." "The process of vegetation, and the constituents of vegetables, are not known to the practical farmer, because they have been difficult to ascertain; and the nature of his manure is involved in the same obscurity. He supposes it to contain every thing needed for every crop."

"If we pursue our investigations a step farther than we have done, we shall discover that phosphate of lime is as constant a constituent of wheat flour as glutin itself. Phosphate of lime, therefore, is as much needed for the production of a crop of wheat, as the substances which supply the starch and glutin. It is not a little remarkable, that this phosphate of lime is soluble in no known fluid, except through the medium of an animal substance, as gelatine, &c. and consequently the same animal substances which furnish the elements of the glutin, will also furnish a medium for the phosphate of lime, which appears to be equally indispensable to the formation of a perfect grain of wheat."

"The only substance now employed for the production of glutin, is the urine of live stock; the alvine excrementitious matter having been proved to contain little or no nitrogen. This urine is applied either by folding, or mixed with farm-yard manure."

Do we not find in the preceding extracts a ready solution of the question, why many lands, particularly in the New England states, which once grew wheat, will not grow it now, although they are manured? Is it not owing to the exhaustion of animal matter, and the almost universal loss of the urine of our stock, which can alone yield the necessary constituents for a wheat crop? The urine of animals constitutes a moiety of the manure of the Flemish farmers. It is carefully collected in tanks or cisterns, to which there are conductors from the cattle sheds, and is applied in a liquid state. But as I despair of seeing the economy of the Flemings imitated among us at present, I will suggest a means of saving at least a portion of what is now lost, in a practicable and cheap way. It is simply to construct concave cattle yards, which shall collect and hold the urine and other liquids. Almost any soil will soon be so puddled as to retain the liquids: but if the yard be plentifully littered with straw and stalks, they will be absorbed to a great extent; or they may be conducted by a drain to a cistern. Ammonia is generated and dissipated by fermentation; but a good covering of litter in the spring, by excluding heat and air, will retard fermentation until it is time to cart the mass to the field. The experiments of Grisenthwaite admonish the farmer of the impropriety of repeating his wheat crops upon the same field, at short intervals. Bones, hair, and other animal substances, contribute to the formation of glutin.

Scientific Memoranda applicable to Rural Affairs.

Grisenthwaite, in the *New Theory of Agriculture* already quoted, to confirm the opinion of specific saline substances being present in particular plants, states, that barley always contains a quantity of either nitrate of soda or nitrate of potassa, (salt-petre,) and he recommends that the seed of this grain be at least steeped in a solution of this salt, as a means of increasing the product; that the superoxalate of lime is the saline food of the pea; that sulphuretted hydrogen gas is constantly present in turnips, and is supplied by gypsum; and that gypsum (sulphate of lime,) is the saline food of clover, lucern, and sainfoin. "Neither wheat, nor barley, nor oats, derive any advantage from gypsum, as it forms no necessary constituent of those grains." *En. of Gard.* p. 302.

These facts are in corroboration of the opinions advanced by Davy, (*Ag. Chem.* p. 293, &c.) that the beneficial effects of gypsum can neither be ascribed to its solvent qualities, nor to its power of attracting moisture from the air; but to the fact, that it constitutes a necessary saline food for the plants which yield it on analysis. "When combined with water," says Davy, "it retains that fluid too powerfully to yield it to the roots of plants;" and experiments satisfied him that it did not assist in the putrefaction of animal substances, nor in the decomposition of manure, but the reverse.

The experiments of the two writers here quoted, and there are none we can quote of better authority, show conclusively that gypsum is an actual manure, and becomes a constituent part of certain plants; and that it is in no wise beneficial to, because it does not constitute a component part of, other plants. Of the first class, clover, lucern, sainfoin, rye grass, cocks foot, meadow fox-tail, and turnips are known to be embraced; and I doubt not that maize, potatoes, and some other broad-leaved plants may be added to it, and will afford gypsum on analysis, as they are evidently benefited by its application. But before gypsum can become the food of plants, it must be decomposed, so as to be taken up by the minute pores of the roots, and the reason of its lying dormant an entire season, and sometimes longer, is probably owing to the want of the necessary agents to decompose it. "Gypsum is soluble in about 500 times its weight of cold water, and is more soluble in hot water." (*Ag. Chem.* 294.) And it is readily decomposed by oxalic acid, (*Parkes' Chem. Ess.*) which abounds in sorrel, dock, and some other plants usually found on a clover or light soil. These facts seem to indicate—

That it is useless to sow gypsum upon wheat, rye, barley, and other crops which do not yield it on analysis, and

That it is adviseable to sow it early upon grasses, while moisture is abundant, and to plough it under for summer crops, that the agents of decomposition, water and the oxalic acid of plants, may act more efficiently in bringing it into action. J. B.

BORING FOR WATER

Extract of a letter from Mr Roberts, Mayor of the Town of Alexandria, dated Jan 9, 1826.

Mr. J. S. Skinner,

Sir,—I have received your letter of the 7th, on the subject of Mr. Disbrow's boring for water at this place, in which you ask—

1. What depth has he got? 295 feet.
2. Is he boring at this time? He is, with 5 hands.
3. What is his present daily progress?

I have kept a memorandum, for some time, of his work, which is as follows:

1825. Nov. 5	—120 feet.	Dec. 16	—254 feet.
" 12	—150 "	" 24	—270 "
" 22	—170 "	" 31	—282 "
Dec. 2	—204 "	Jany. 7	—295 "
" 9	—230 "		

4. What is his prospect of ultimate success?

Mr. Disbrow has always appeared entirely sanguine of reaching water; but this, I infer, arises from the circumstance of his having heretofore succeeded in all his attempts. He does not appear to me to have any theory, and very little science, but much mechanical ingenuity and great perseverance. The boring has gone through various strata, and is now working laboriously through a tenacious, apparently incipient grey free-stone, which yields to the auger with difficulty, and becomes hard on exposure to the air. Mr. D. is at present in New Jersey.

Very respectfully, your obed't serv't,
JOHN ROBERTS.

LADIES' DEPARTMENT.

A WHISPER TO A NEWLY-MARRIED PAIR.

(Whisper to the Husband, concluded from p. 341.)

Chapter VII.

ON EXPENDITURE.

In pecuniary matters do not be penurious, or too particular. Your wife has an equal right with yourself to all your worldly possessions. "With all my worldly goods I thee endow," was one of the most solemn vows that ever escaped your lips; and if she be a woman of prudence, she will in all her expenses be reasonable and economical: what more can you desire? Besides, really, a woman has innumerable trifling demands on her purse, innumerable little wants, which it is not necessary for a man to be informed of, and which, if he even went to the trouble of investigating, he would hardly understand.

You give your wife a certain sum of money. If she be a woman of prudence; if your table be comfortably kept, and your household managed with economy and regularity, I really cannot see the necessity of obliging her to account to you for the *exact* manner in which she has laid out each penny in the pound. Pray, do allow her the power of buying a yard of muslin, or a few pennyworth of pins, without consulting the august tribunal of *your* judgment whether they shall be quaker pins or minikins.

I have often with wonder remarked the indifference with which some men regard the amiable and superior qualities of their wives! I by no means mean to say, that every wife possesses these qualities: I only speak of a description of females who are, in truth, an ornament to their sex—women who would go the world over with the husband they love, and endure, without shrinking, every hardship that world could inflict. Is his income stinted? With what cleverness will a wife of this description act, and economise, and endeavour to abridge her expenses, sitting down with such cheerfulness to her scanty meal, suffering privations that probably she never was accustomed to, concealing their poverty from the world, and endeavouring to gild it over with a genteel and respectable appearance; nursing and educating her children, and assuming perhaps in the same day the varied character of gentlewoman, preceptress and housewife, and yet insensibility to her merit oftimes unkind language, is perhaps the return she receives from her unworthy husband.

How often is a woman grieved by the foolish extravagance of her husband! Among other absurdities, will he not sometimes give for a horse, or a dog, or spend at a tavern or a club, a sum of money absolutely wanted for the necessary comforts of his family; thus squandering, in a moment of simple folly, what perhaps has cost his wife many a hard effort to save.

When once a man has entered the marriage state, he should look on his property as *belonging to his family*, and act and economize accordingly. I remember being acquainted with a gentleman who was constantly saying, "It is true, my property is large; but then it belongs not to myself alone, but also to my children: and I must act as a frugal agent for them. To my wife, as well as those children, I feel accountable either for economy or extravagance." Another gentleman of my acquaintance, who was in stinted circumstances, was constantly debarring himself of a thousand little comforts, even a glass of wine after dinner, sooner than infringe on what he used to call, *his children's birthright.*

The three following remarks, from the pen of the excellent Mrs. Taylor, are well worth attention. "To what sufferings are those wives exposed, who are not allowed a sufficiency to defray the expenses of their establishment, and who never obtain even their scanty allowance, but at the price of peace! Men who act in this way often defeat their own intentions; and by constant opposition render their wives lavish and improvident, who would be quite the reverse were they treated in a more liberal manner. Wherever it is adopted, it is utterly destructive of connubial confidence, and often compels women to shelter themselves under mean contrivances and low arts." You complain that your wife uses manœuvres and efforts to get money from you: be generous to her; treat her as a wife ought to be treated, and I venture to affirm you shall have no further cause of complaint. "A man who supplies unavoidable and necessary expenses with a parsimonious hand, will rarely be attentive to the extra calls of sickness, or endeavour to alleviate, by his kindness, the sufferings of a constitution perhaps wearing out in his service. It was observed, upon the subject of cruelty to animals, that many, because they would not drown, burn, or scourge a poor animal to death, think themselves sufficiently humane, though they suffer them to famish with hunger: and does not the conduct of many husbands suggest a similar idea? They imagine, that if they provide carefully for the maintenance of their families; if their conduct is moral, if they neither beat, starve, nor imprison their families—they are all that is requisite to constitute good husbands, and they pass for such among the crowd: but as their domestic virtues are chiefly of the negative kind, the happiness of her whose lot it is to be united to such an one for life, must be of the same description. Even the large allowance, 'Have what you like,' is insufficient to satisfy the feelings of many a woman, who would be more gratified by the presentation of a flower, accompanied with expressions of tenderness, than by the most costly indulgence they could procure for themselves."

Chapter VIII.

ON INCREASE OF FAMILY.

Is there a prospect of your wife becoming a mother? Then, indeed, has Providence placed her in the most interesting of all female situations; and strong is her claim on your tenderness. The circumstance is a silent, though powerful appeal to your feelings; and he must truly have an unfeeling, I might almost say an unprincipled disposition, who does not find himself irresistibly drawn by the new and tender tie which now exists

It may, however, be the will of the Almighty, to withhold offspring from you; and any thing said, either by husband or wife, that could give the other pain on this subject, is more than reprehensible; it is contemptible. A woman is scarcely ever so unamiable as to do it: and should her husband be unfeeling enough to betray even a word which could hurt the feelings of his wife on the occasion; he may talk and sophisticate the matter as he pleases, but in truth he can have but little pretension to religion, to sentiment, or to feeling.

How unlike the noble-minded Elkanah, when, with sentiments at once manly and tender, he thus addresses his weeping wife: "Hannah, why weepest thou? and why eatest thou not? and why is thy heart grieved? am not I better to thee than ten sons?" (1 *Sam.* i. 8.)

CONCLUSION.

And now, proud lord, farewell: my whisper is nearly ended; and I am very certain my silence will not grieve you. But ere we finally part, allow me to call to your recollection that most important period of your life, when, at the altar of your God and in the presence of your fellow creatures, you solemnly vowed, "to love your wife, to comfort her, to honour and keep her, in sickness and in health, for better for worse, in poverty and in riches, and, forsaking all others, to keep thee only unto her, as long as you both should live!" Let me ask, have you kept this solemn vow? Commune with your own heart; ask your conscience and your feelings; and tremble before an offended God if you have dared to break it.

How impressive, on all occasions, are the words of St. Paul; and in what a sweet and tender point of view does he appear when he says, "Husbands, love your wives, and be not bitter against them." (*Col.* iii. 19.) And again, "Husbands, love your wives, even as Christ also loved the Church, and gave himself for it. So ought men to love their wives as their own bodies. He that loveth his wife, loveth himself. For no man ever yet hated his own flesh; but nourisheth it and cherisheth it, even as the Lord the Church. For this cause shall a man leave his father and mother, and shall be joined unto his wife, and they two shall be one flesh." (*Eph.* v. 25, 28, 29, 31.) "Wherefore," says our blessed Saviour, "they are no more twain, but one flesh. What therefore God hath joined together, let not man put asunder." (*Matt.* xix. 6.)

In the second chapter of Genesis, this subject is mentioned with peculiar simplicity and beauty. "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul." (ver. 7.) "And the Lord God planted a garden eastward in Eden; and he took the man, and put him into the garden of Eden to dress it and to keep it." (ver. 8, and 15.) "And the Lord God said, It is not good that the man should be alone; I will make him an help meet for him. And out of the ground the Lord God formed every beast of the field, and brought them unto Adam; but for Adam there was not found an help meet for him. And the Lord God caused a deep sleep to fall upon Adam, and he slept: and he took one of his ribs, and closed up the flesh instead thereof; and the rib which the Lord God had taken from man made he a woman, and brought her unto the man." *And Adam* (evidently struck with delight by the lovely being produced from his side—*the very side next his heart,*) affectionately says, "This is now bone of my bone, and flesh of my flesh: she shall be called Woman, because she was taken out of Man." And then, as if impressed with the importance and sacredness of the union, what an observation is the following! "Therefore shall a man leave his father and his mother, and shall cleave unto his wife: and they shall be one flesh." (ver. 18–24.)

I hope I shall not trespass on my reader's patience, if I introduce what Milton so beautifully says on this subject. He first speaks of Adam, as placed among all the exquisite beauties of Paradise:

"Surrounded by fragrance and by joy,
By hill and dale, and shady woods, and sunny plains,
With birds on branches warbling;
And liquid lapse of murmuring streams,
And banks profuse with flowers!

Still he is dissatisfied: an aching void, a want of what he could scarcely define or explain, weighs down his spirits, and deprives his heart of all enjoyment. At length, he begins to understand the nature of his feelings, and thus addresses the Almighty—

"——— Author of this universe,
And all this good to man! for whose well-being
So amply, and with hands so liberal,
Thou hast provided all things!—
But with me, I see not who partakes. In solitude
What happiness? Who can enjoy alone?
Or, all enjoying, what contentment find?"

Though perfectly anticipating Adam's wishes, and quite conscious "it was not good for man to be alone," still does the Almighty seem desirous to put his feelings to the test, and points out the innumerable beauties and pleasures which surround him in this "garden of bliss," mentioning the various birds and fishes, and beasts, he has brought him for his use, and asks what more he can desire? But Adam, still discontented, says he wants something like himself—

"Something fit to participate all rational delight:
Surely the brute cannot be human consort?"

At length, the Almighty condescendingly answers:

"Thus far to try thee, Adam, I was pleas'd;
Good reason was, thou freely shouldst dislike,
And be so minded still.—I, ere thou speakst,
Knew it not good for Man to be alone:
What next I bring shall please thee, be assur'd;
Thy likeness, thy fit help, thy other self,
Thy wish exactly to thy heart's desire!"

Adam relates the above to the angel Raphael, and thus goes on:

"He ended, or I heard no more, for now
Mine eyes he clos'd, but open left the cell
Of fancy; by which,
Abstract, as in a trance, methought I saw
Th' Almighty; who stooping, open'd my left side, and took
From thence a rib, with cordial spirits warm,
And life-blood streaming fresh. Wide was the wound,
But suddenly with flesh fill'd up, and heal'd!
The rib he form'd and fashion'd with his hands;
Under his forming hands a creature grew,
So lovely fair,—
That what seem'd fair in all the world, seem'd now
Mean, or in her summ'd up, in her contain'd,
And in her looks, which from that time infus'd
Sweetness into my heart, unfelt before!
She disappear'd, and left me dark!—I wak'd
To find her, or for ever to deplore
Her loss, and other pleasures all abjure;
When out of hope, behold her, not far off,
Such as I saw her in my dream, adorn'd
With what all earth or heaven could bestow,
To make her amiable:
Grace was in all her steps, heaven in her eye,
In every gesture dignity and love!
I, overjoy'd, could not forbear aloud,
'This turn hath made amends; thou hast fulfill'd
Thy words, Creator bounteous and benign,
Giver of all things fair, but fairest this
Of all thy gifts! I now see
Bone of my bone, flesh of my flesh, myself
Before me!—Woman is her name, of Man
Extracted: for this cause he shall forego
Father and mother, and to his wife adhere;
And they shall be one flesh, one heart, one soul!'"

My Wife.

In chill affliction's dreary hour,
When Fortune frowns and tempests lower,
Who sooths me with her gentle power?
My Wife.

When various cares disturb my rest,
By sickness or by pain oppress'd,
Who lulls to peace my troubled breast?
My Wife.

When absent long and far away,
Who thinks of me the live-long day?
And who for me to Heaven doth pray?
My Wife.

And when in all her matron charms,
My safe return her bosom warms,
Who flies to clasp me in her arms?
My Wife.

Who gilds my children's infant day
With cultivation's dawning ray?
And points to heaven, and leads the way?
My Wife.

And when, perhaps, by grief oppress'd,
Some childish want disturbs their rest,
Who lulls them on her snowy breast?
My Wife.

When various frailties intrude,
Who strives to quell my passion rude,
And sweetly tempts me to be good?
My Wife.

With sense my errors to descry,
Those errors causing many a sigh,
Who grieves, conceal'd from every eye?
My Wife.

And when the gay and thoughtless roam
To pleasure's captivating dome,
Who, sweetly wise, prefers her home?
My Wife.

When time shall silver o'er my hair,
The work, perhaps, of many a year,
Still to thy bosom I'll be dear,
My faithful Wife.

And shall I, man so proud and vain,
Some foolish, light caprice to gain,
E'er give this noble creature pain?
Forbid it, Heaven!

MISCELLANEOUS.

Comparative Commerce.

An article in the *Revenue Encyclopedique* gives the following comparative view of the Commerce of Great Britain, France, and the United States:

	Great Britain.	France.	United States
	Francs.	Francs.	Francs.
Home Trade,...	8,601,850,000	6,476,160,000	2,493,000,000
Foreign Trade,.	1,894,275,000	8474,50,000	786,991,000
Total of Commercial transactions,........	10,496,125,000	7,323,610,000	3,279,991,000
Exports of Raw Produce,........	75,725,000	149,050,000	248,955,000
Exports of Manufactures,.....	810,850,000	260,000,000	13,036,000
Exports of Foreign Articles,.	253,875,000	52,000,000	142,000,000
Total of Exports	1,140,450,000	461,050,000	403,991,000

This table, the materials of which are derived from official documents on the most authentic information, furnishes data for an interesting comparison between the three great Commercial Powers of the civilized world. It appears that the home commerce of France, which consists of the consumption of raw produce and manufactures by the population, is less than that of Great Britain by one-fourth, whilst it is about twice and a half as much as that of the United States. Compared with the population of each State, the consumption is in the proportion of 290 francs for every individual in Great Britain, 249 francs in the United States, and 216 francs in France. The foreign commerce presents the following results: That of France is less than that of England by upwards of 1,000,000,000 of francs, and it is greater than that of the U. States by 60,000,000—that is to say, one-thirteenth of the whole. Compared with the population, the foreign commerce is in the proportion of 86 francs for every individual in Great Britain, of from 20 to 30 francs in France, and of about 78 francs in the United States. The total of the commercial transactions of France, home as well as foreign, is a third less than that of Great Britain, but it exceeds that of the United States by much more than a half.

With respect to exportation, the value of which may be considered as affording a rule by which to judge of the commercial prosperity of each state, the following results are obtained. The exportation of French raw produce exceeds in value that of Great Britain by one-half, whilst it is only in the proportion of three to five compared with that of the United States, which is wonderfully increased by the immense resources of her forests and fisheries, and particularly by the products of the southern states of the Union. The value of French manufactures exported wants about 10,000,000 francs to make it equal to one-third of those exported by Great Britain, but it is more than 20 times greater than the value of the exported manufactures of the United States.

The greatest inferiority of France exists in the warehousing or deposit system, and re-exportation trade. This important branch is, in Great Britain, more than five times as much as in France, and in the United States it is about three times as much.

The exportation of indigenous productions, which affords a test of the agricultural and manufacturing prosperity of each country, is, on an average of years, found to be as follows:—

Great Britain, ...	[illegible]6,575,000 francs.
France, ...	109,050,000
United States, ...	261,991,000
Russia, ...	201,400,000

Thus it will be seen that England annually exports a quantity of native productions which equals or even surpasses in value all the exportations of a greater part of the other great commercial powers, and a population of 22,000,000 is able, with the assistance of superior industry, to produce every year riches equal, at least, to those which are created by large states peopled by [illegible],000,000 of inhabitants.

The exportations of France of agricultural and manufacturing produce are only equal to the half of those of England, whilst they almost equal the whole of those of Russia and the United States put together.

Thus the 10,000,000 of American and the 15,000,000 of Russian population do not together create riches greater than those which are annually created by the population of France alone.

Compared with the number of inhabitants in each country, the exportation of native productions is in the proportion of [illegible] francs for every individual in Great Britain, of 26 francs for every inhabitant in the United States, of 11 francs for every inhabitant of France, and of only of from [illegible] to [illegible] francs for every subject of the Russian empire. Considered in this mode, this species of exportation presents the following relative terms with respect to the different countries before named:—Russia, 1; United States, [illegible]; France, [illegible]; England, [illegible]. These terms must undergo some alteration when, to the exportation of native produce is added that of foreign produce re-exported. They then stand as follow—Russia, 1; United States, 2; France, 24; England, 57.

On examining the data of these numerical results, it is found that the principal superiority of English commerce consists in the exportation of the produce of English industry, and that of America in the re-exportation of foreign produce.

Considered in the total, and without regard to particular objects, the French exportation exceeds that of Russia by 200,000,000 of francs. It exceeds that of America by 60,000,000, and it is less than that of England by 679,000,000. It is in the proportion of 9 to 23 compared with that of England, and of 9 to 8 compared with that of America. There is, then, it will be seen no foundation for the statement that the commerce of the United States surpasses that of France; but it is impossible to doubt that it soon will do so, if French commerce remains stationary instead of following the rapid development observable in that of other maritime nations.

In the space of a century, Great Britain, in consequence of the natural advantages of her territory, of the activity of her population, of the wisdom of her institutions, and of favourable events, has succeeded in establishing a commerce whose prosperity is unequalled in the world, and unexampled in history.

During the period of a single generation, the United States, entering upon the career of civilization with the vigour of a new and the experience of an old state, has become the third power of the maritime world.

Much less time would be necessary to enable France to develop her advantages which she derives from her favourable climate, from the vast and fertile territory, from her numerous, active, and industrious population, and especially from her social organization. It would be more easy for France to succeed in this undertaking than was for her, ten years ago, the task of repairing the disasters of a civil war and foreign invasion, of rendering herself capable, after a maritime exclusion of 30 years, so closely to follow Great Britain in that career of commerce in which so much ability and perseverance has been displayed.

By this experience France can measure her strength and calculate her power; for her commercial greatness, after so many calamities, is perhaps a more surprising prodigy than the prosperity of England after so long a course of success.

[*Bell's Weekly Messenger.*

THE FARMER.

Baltimore, Friday, January 20, 1826.

Erratum.—In Mr. Barton's communication on "cob meal," p. [illegible], 1st column, line 10, for *average*, read *[illegible]*.

GRAPE VINES.

10,000 Grape Vine roots, of the most approved German sorts, for making of wines, of the following names—Good [illegible], Ruesling, Traminex, Tokay or Salviner—are offered for sale low by the subscriber.

HENRY [illegible] *living on the Hook'stown road, nearly opposite Biddle st.*

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Colonel Taylor's errors opposed by facts and the highest authorities—Address delivered before the Pennsylvania Agricultural society, by Wm Darlington, M. D.—Comparative value of Sheep—Culture of fine Tobacco in Ohio—Inquiry to Cotton Planters—Cotton, inquiry—Notes of Judge Buel on Rural Economy, [illegible] Clay, Food of Plants, Chemical Analysis—Mr [illegible] for Water in Alexandria—A [illegible] to a North-Maryland Fair, continued—Comparative Commerce of France, England, and the United States.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	WHOLESALE. to	RETAIL. from	RETAIL. to
BEEF, Baltimore Prime,	bbl.	8 50	9 00		
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	33	35		
COFFEE, Java, ...	—	18	19		25
Havana, ...	—	16½	17½	18	20
COTTON, Louisiana, &c.	—	18	19		
Georgia Upland, . . .	—	15			
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	33		37	
FISH, Herrings, Sus.	bbl.	2 75	3 25	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90	1 00		
FLOUR, Superfine, city,	bbl.	4 75	5 00	6 00	6 50
Extra . . . . do.	—	5 00	5 50		
Fine, ...	—	4 75			
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	54	57		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	60	87		
do. Red, ...	—	80	85		
do. White Flint, . .	—	2 00			
Rye, ...	—	55			
Barley, ...	—	95	1 00		
Clover Seed, Red . .	lb.	4 75		5 25	
Ruta Baga Seed, . . .	bush	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36		
Beans, White, ...	—	1 50		1 62	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	29		
HOGS' LARD, ...	—	9	10	12	
LEATHER, Soal, best,	—	26	27		
MOLASSES, sugar-house	gal.	45			
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	1 87½	2 00		
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2 00			
OIL, Whale, common, .	gal.	32	35		
Linseed, ...	—	70			
PORK, Baltimore Mess,	bbl	13 00			
do. Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	6 00	6 12½		
RICE, fresh, ...	lb.	3	3½	6	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	5½	7½	10	12
WHISKEY, 1st proof, .	gal.	25	27	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37	50	
SUGARS, Havana White,	c.lb.	13 50			
do. Brown, . .	—	10 75	11 00		
Louisiana, ...	—	10 00	11 00		none
Loaf, ...	lb.	19	22	20	25
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	75	80	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	17½		25	
SALT, St. Ubes, ...	bush	46	48		
Liverpool Ground . .	—	50	52	65	
SHOT, Balt. all sizes, .	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 30		
Lisbon, ...	—	1 15	1 25	1 62	1 76
Claret, ...	doz	4	9		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	[illegible]	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	[illegible]	[illegible]		

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AGRICULTURE.

ON ROOT CROPS—GROWING—SECURING AND APPLYING THEM.

(Communication to the Pennsylvania Agricult. Society.)

John Hare Powel, Esq.,
Corres. Sec'ry of the Penn. Agricul. Society:

Sir,—My means are too limited to try any experiment, except upon a small scale. But perhaps you are willing to admit, that facts may be developed from experiments made on a small one, as well as from those made on a large one; that in the former case, the minutiæ frequently necessary to insure complete success, would, in all probability, be attended to; whereas, in the latter, it might with equal probability be overlooked. It may, I believe, be said of agriculture, the primitive and most important of all arts, that there is not another single human occupation, to which the old maxim, that a thing *once* well done is *twice* done, applies with greater force Without trespassing too much on your time, I must beg leave to premise, that if in the course of my necessarily circumscribed operations in husbandry, I should discover any thing which I might conceive useful and interesting to the community, and worthy of communication to the society, I shall take good care that I advance nothing that I cannot support by ample testimony. I have introduced this preface in part, because I apprehend that some may appear a little sceptical, on a portion of what follows, especially as I have such powerful authority opposed to me.

My present observations will be chiefly confined to the culture and use of the common field turnip, the value of which, I apprehend, is not sufficiently appreciated in this country. I have frequently been told by farmers, that unless near market, they are scarcely worth raising, and as to fattening cattle with them. that was a thing utterly impracticable Having seen that in England fat beef is made from turnips, with very little other food, and believing there was the same nutrition in them here as there, I resolved to satisfy myself. I, therefore, about the beginning of January last, purchased and stalled a pair of young oxen, or rather what the drovers would term coarse, poor, rough stags. They cost me $25. You may judge, by the price, they were no great things, as fair store cattle of the same weight were selling at the same time and place, for 17 to 18 dollars per head I had two bushels of turnips chopped up morning and evening, and three quarts of ground oats and corn meal, or buckwheat meal, mixed with each mess, which I divided between them. In the middle of the day and at night they had alternately, oat straw, and corn fodder. In three months and an half they were good beef, but I kept them another month for a better market, and the latter end of April turned them out to pasture with the cows, still feeding them night and morning, but more sparingly. On the 25th of May, I sold them for $70.20, which was six dollars per hundred. A steer fattened by Mr. John Risden, at Hopkins' ferry, near Holmesburg, was slaughtered at the same time, and was put up about the same time that mine were. His was fattened on 12 quarts of Indian meal, about ½ bushel potatoes, and as much good clover hay as he could eat per day. There was very little difference in the quality of the meat; indeed I believe they would have commanded the same price at the shambles—and look at the difference of feed. The quarters weighed as follows:

One Stag, . .	605 lbs.	—gut fat, 65 lbs.
One do. . . .	565	— do. 60
Mr. Risden's Steer,	650	— do. 75

This establishes the fact, I think, that there is some virtue in a white turnip, although a celebrated writer, in eulogizing his favourite plant, the ruta baga, contemns it as the "poorest of all roots of the bulb kind, cultivated in the fields." Again, he says, "hogs are the most able tasters in all creation; they will eat nothing that is poor in its nature; a white turnip they will not touch unless they be on the point of starving."

My hogs, however, were not such epicures; I have abundance of proof, that I kept 13 hogs, shoats, and pigs, all last winter, almost entirely on white turnips; they had no other food besides a bucket full, containing less than a half bushel of rye shorts to a hogshead of water, and the sour milk from three tolerable and middling fresh cows. They were always ready for the turnip, and kept in excellent condition. Nay, further! the *fat hogs* fed on corn for five weeks before they were killed, ate them with avidity, until the day before they were slaughtered. I sometimes chopped up carrots, beets, and turnips together, to see if a preference was given. The larger swine ate indiscriminately; the smaller ate the turnips first, perhaps because they were more easily masticated. My milch cows had from ½ to ¾ bushels per day each, with three or four handfuls of meal, which kept up a flush of milk, and I have at no time had sweeter butter. Now, after what I have stated, you will readily conceive it would be as difficult for the aforesaid writer to convince me, that the white turnip is so very poor a thing as he represents, as it was for him to persuade the generous inhabitants of the Emerald Isle, that nine-tenths of the Irish potato is composed of "earth, straw and water." Yet this same writer admits, alluding to the devastation of the turnip-fly in England—"that if any man could find out a real remedy, and could communicate the means of cure, while he kept the means a secret he would be a much richer man than he who should discover the longitude, for about *fifty thousand* farmers would very cheerfully pay him *ten guineas a year each.*"

Aye! what would Great Britain do with her numerous flocks and herds, without her turnip crop; and this subject, I sincerely believe, is daily becoming of more importance to the people of this country, and to the state of Pennsylvania in particular. Our population is constantly and rapidly increasing; manufactures are increasing in the same or greater proportion, and wool-growers will multiply in the same ratio. Sheep, of which it is computed there are already about 2,000,000 in this state, are now decidedly the most profitable stock farmers can keep. Wool is *now* brought all the way from the state of Ohio to the Philadelphia market. Let the sheep proprietors, then, if they wish to keep their flocks on cheap, succulent and wholesome food, during the winter months, look to the turnips, although the climate of this country may not be so congenial to the growth of this esculent as that of England. I have never found much difficulty in raising a crop, even in unfavourable seasons. The plan that I adopt and recommend is this: if. for instance, I wish to sow three or four acres, I begin early in the season, and prepare half an acre or more, according to the state and appearance of the weather; as soon as the ground is well ploughed and harrowed, I immediately sow whilst fermentation is at work; this is of more importance than many people imagine. Always sow and plant on fresh ground, if possible. I then run a roller over, if the ground is not too wet, to press the seed to the earth, which I also consider of consequence, as vegetation will more speedily ensue. I would also advise that a harrow should be run over the seed before the roller, as it may give the plant two chances against its most formidable enemy, the fly. I fancy it has been pretty clearly ascertained that this seed will bear a deep covering. I generally sow about 1½ lbs. per acre In two or three days, or as soon as convenient, and the weather permits, I prepare another half acre or more, and so on to the end. If, perchance, any particular sowing should have been cut off by the fly; or from drought, or some other unforeseen cause, did not succeed, I stir well the ground afresh and sow again After the ground is prepared, the labour necessary to bestow on a turnip crop, compared with its value, is not worth mentioning. Sowing, pulling, topping and housing comprises the whole. I last year sowed some purple top amongst four acres of corn, broadcast; I presume I had 200 bushels to the acre; what I sold in market I got 18½ to 25 cents for. But supposing them to have been worth 10 cents for farm use, my turnips were of more value than my corn of 40 bushels to the acre, at the price of that article last year. Some of the turnips weighed 4 lbs., and cultivated and harvested at less than one-fourth the expense of corn. If allowed to arrive at maturity, two men and two boys will pull, top and secure from the frost even in the field, put in heaps of 40 or 50 bushels each, and covered with earth, from 80 to 100 bushels, or more, according to their size; and still more, if thrown into vaults or cellars, in the course of a day.

The objections made by many, that turnips are not worth attending to in an Indian corn country, because they are a precarious crop, appears to me to be an unfounded prejudice. Corn, doubtless, is an excellent crop, and where justice is done to it, entitled to all those eminent qualities emphatically ascribed to it, of "meal, meadow and manure" But corn, as well as the turnips, has its enemies, and requires constant attention, from the time it is planted until the ears begin to appear. I have shown to the best of my judgment and that of others, that where land is capable of producing 40 bushels of corn to the acre, that the vacant spaces between have yielded 200 bushels of turnips in a favourable season. But supposing the turnips fail entirely, which is not probable, if the method I suggest be adopted, what is there lost in this case but a little labour and a little seed; a consideration, I should hope, too insignificant to deter any husbandman, who studies his interest, from hazarding the experiment. I believe I have exceeded the usual bounds of a communication; permit me, however, to conclude, by recommending the advice of good old Ecclesiastes, the preacher, (not only as regards the sowing generally in season, but more particularly as respects the turnip,) who says: "In the morning sow thy seed. and in the evening withhold not thy hand, for thou knowest not whether shall prosper, either this or that, or whether they both *shall be* alike good." I am, dear Sir,

Your most obed't serv't,
JAMES WILLIAMS.

Philadelphia county, 1825.

FROM THE NEW ENGLAND FARMER.

COB MEAL.

Massachusetts, Jan. 16, 1826.

Mr. Fessenden—I observed in your paper of Friday last a communication addressed to the Editor of the American Farmer, by Mr. Barton, giving an account of his experiments to ascertain the value of cob-meal in fattening cattle, &c. His results differ so much from the experience of my neighbours and myself on this subject, that I am induced to state to you my own observations on its effects. I have used cob-meal during this and the last winter for my horses, and in fattening my oxen and hogs. Mr. B. observes that his cattle were never cloyed with it; my own have been so much so, as in many instances to refuse to eat it for several days together, and I am inclined to think, they are as likely to be cloyed with it, as winter oats and corn meal.

I fattened four hogs killed in Dec. last, which together weighed more than 1600 lbs., and were uncommonly fine pork. They were fed entirely with cob-meal excepting for 2 or 3 weeks, when they were kept upon oats and corn-meal, but they did not eat the latter with a better relish nor fatten faster upon it than upon cob meal; and that not scalded or boiled by which it would have been greatly improved; this agrees wholly with the experience of my neighbours.

With respect to my horses, I give them no other provender than cob-meal, mixed with straw and salt hay cut fine—and this keeps them in very good order.

On the whole I have a favourable opinion of cob meal for the above purposes. It has been recommended by some as excellent for puddings, but cob puddings must be too meagre a diet for J. B.

ANGULAR BALANCE PLOUGH.

Mr. Editor—Being desirous of promoting the interest of agriculture, we, the undersigned, having recently assembled on the farm of Mr. George Fitzburg, with an intention of viewing the operation of various ploughs, and of ascertaining by actual experiment, the power of propelling these ploughs, have thought proper to send you this communication.

We have correctly ascertained the power of propelling ploughs, by a new invention of Mr. Stephen M'Cormick, called the Angular Balance, the construction of which is very simple, and the power of propeling ploughs, may be ascertained with minute accuracy.

The experiments were made with ploughs, in various soils, and completely to our satisfaction, and we are decidedly of opinion that the newly invented patent plough, made by Mr. Stephen M'Cormick, surpasses any implement of that kind that has ever come under our observation. As to the simplicity of its construction, the facility with which it may be worked; and as to its durability, we think we should be justified in declaring, that it is inferior to no plough that we have ever seen in that respect.

JOHN G. KIRBY,
SAM'L. CATLETT,
HENRY FITZHUGH.

The following is Mr. M'Cormick's description of his Plough.

Its excellence consists more particularly in the simplicity of its construction, and from the experiments made by those gentlemen, (and manifestly to their satisfaction,) it can be drawn with much less labour to the horse, which is an important consideration with farmers. This plough is not subject to be clogged with the soil or any vegetable matter, and can be changed without any inconvenience or delay of time, to suit different soils, or the strength of the teams. The mould board contracts or expands by turning the cross piece near the heel of the plough, which is made of iron, having a screw at each end on the principle of the screw auger.

The share is welded to the bar, and is confined at the bottom of the mould board near the point by a catch, which passes through the share and permanently confines it. This plough requires only one brace, which acts in the most powerful manner, and is under the control of only one screw. The bar is protected by a piece of cast iron with two edges, and is riveted or screwed to the same. When one edge is worn out, turn the other over, and it furnishes a new one, and when that edge becomes useless, a new piece can be obtained for twenty five cents. The plough may be worked without a coulter, to suit the fancy of the purchasers. But the mould board is so constructed as generally to do away the necessity of a coulter.

Fredeericksburgh Herald.

EXTRAORDINARY COWS.

Sir—In your Gazette of the 26th November last, we see that at Worcester cattle show, the Governor of Massachusetts has offered for exhibition a cow, which has often given 27 quarts.—When visiting the *Chalais of Gruyere* in Switzerland, thirty years ago, I have there seen numerous herds of cows, which yielded from 60 to 64 quarts of excellent milk each every day. Some time after when visiting the establishment of Mr. Chabert, the director of the veterinary school of Alfort, I saw the same species of animal affording, upon a soil far inferior to the former, as much as three buckets or 12 gallons of milk, and never less than 8 gallons every day.

Mr Chabert, in his publications, said that he had observed that cows, fed in the winter upon dry substances give less milk than those which are kept upon a green diet, and also that their milk loses much of its quality. He published the following receipt, by the use of which his cows afforded him an equal quantity and quality of milk during the winter as during the summer.—Take a bushel of potatoes, break them whilst raw, place them in a barrel standing up, putting in successively a layer of potatoes and a layer of bran and a small quantity of yeast in the middle of the mass, which is to be left thus to ferment during a whole week, and when the vinous taste has pervaded the whole mixture, it is then given to the cows, who eat it greedily.

The inhabitants of Pensacola own thousands of cows, yet I know no place where milk is so scarce: Is it not possible to remedy that scarcity, by the use of the above, as a winter food for the cows? But, as bran is never seen here and as the Irish potatoes, so named, are too dear for the purpose, I would propose the following alterations to the receipt.

Take any quantity of sweet potatoes, break them, the finer the better, have an equal quantity of corn or peas or both together, or rough rice when cheap, boil them and mix them quite hot with the raw potatoes, no yeast will be necessary, inasmuch as the sacharine particles of the sweet potatoes will produce the vinous fermentation and be much more productive of milk than the other kind of potatoes. One fourth part cotton seed, still fresh or out of a mass where they have begun to ferment and thus prevented from becoming dry will very well replace any of the other grain above mentioned. In Switzerland where chestnuts are extremely abundant, they make use with equal success of a similar preparation, in which that fruit forms the principal ingredient.

[*Pensacola Gazette.*

ON GRASSES.

[There is no subject, connected with the improvement and prosperity of American agriculture, that opens so wide a field for investigation as does the inquiry into the history, culture and nutritive properties of the various *grasses*, which are suitable for permanent pasture and for hay. Whilst there are several hundred varieties, capable of being easily cultivated, and of more or less value, according to the objects for which they are designed, the soil on which they are to be sown, the general impression is, that there are but some half dozen; and the knowledge and comparative value even of these, is very limited—such as has been afforded by mere chance and untested tradition, and slight observation without actual experiment. A work, therefore, which should be the result of actual and repeated experiments, had become a *desideratum*, and has been supplied in the "*Hortus Gramineus Woburnensis; or, an Account of the Results of Experiments on the produce and nutritive qualities of different Grasses and other Plants used as the food of the more valuable Domestic Animals, instituted by John, Duke of Bedford.*" This is one of the works which has been procured for the use of the Maryland Agricultural Society, by the munificent liberality of Robert Oliver, Esq., who so generously contributes annually towards the formation of an agricultural library—thus doing the office of a generous patron, whilst he refuses to be called its president. Every member of the Agricultural Society who desires to know, by a view of it, the *name* and *properties*, and suitable soil for any particular grass, has only to consult this work.

We shall copy very freely from it for the American Farmer. For the present, we have space only for the following curious tables.]

A certain quantity of food will keep an animal for a great length of time, without increasing or diminishing its weight in any sensible degree; but if the quantity of food be sufficiently augmented, under favourable circumstances, the animal becomes fat, and its weight consequently increased. We have no means, however, to ascertain the exact proportions of food required for these two purposes distinctly, for it depends not on the quantity and quality of the food alone; the age of the animal, and its exposure to heat or cold, are also concerned in the process. It is likewise evident, that of two animals of the same breed or variety, the one will frequently acquire a much greater weight of flesh in any given length of time than the other, though both shall have been fed on the same kind of food, and in all other respects treated equally. The nutritive powers of the food cannot therefore be determined absolutely, even by these means, though the comparative merits and value of the different breeds or varieties of animals are thereby fully ascertained; for it is manifest, that it is not the deficiency of nutritive matter in the food, but want of power in the animal to profit by it.

The results of the numerous valuable experiments made by order of the late illustrious Duke of Bedford, to prove the relative value of the different breeds of sheep and oxen, place the truth of the above remarks in a clear light. I may be permitted, therefore, to quote from Mr. Young's "Annals of Agriculture," the results of one of these experiments, which was made on six oxen.

"*An Experiment on Six Oxen, from November 16, 1797, to December 10, 1798, made by order of the late Duke of Bedford*

		Food given.	Food taken back, or Offal	Food consumed.	Live weight 16th Nov. 1797.			Live weight 9th Dec. 1798.			Live weight gained.		
		lbs.	*lbs.*	*lbs*	*cwt.*	*qrs.*	*lbs.*	*cwt*	*qrs.*	*lbs*	*cwt.*	*qrs.*	*lbs*
No. 1. Hereford Ox.	oil-cake	—	—	—	17	0	1	18	3	0	1	2	27
	turnips	3060	360	2700									
	hay	530	43	487									
No. 2. Hereford Ox.	oil cake	450	26½	423½	18	1	0	21	0	25	2	3	25
	turnips	3040	328	22,712									
	hay	467	34½	432½									
No. 3. Devon Ox.	oil-cake	450	11½	438½	14	1	7	17	2	7	3	1	0
	hay	3090	422	2668									
	turnips	376	81	295									
No. 4. Devon Ox.	oil-cake	450	7½	442½	14	2	14	19	1	0	4	2	14
	turnips	3000	364	2636									
	hay	475	32½	442½									
No. 5. Sussex Ox.	oil-cake	450	17½	432½	16	2	0	19	3	0	3	1	0
	turnips	3030	375	2655									
	hay	443	51	392									
No. 6. Leicester Ox.	oil-cake	450	15½	434½	15	2	14	18	2	0	2	3	14
	turnips	3010	358	2652									
	hay	447	46½	400½									

The oxen were weighed on the day that they were put up for experiment; the food that was given to them daily, was likewise weighed, and the refuse or offal was taken back, and its weight ascertained. hardly any thing could be more satisfactory than this mode of conducting the experiment.

The Devon ox, (No. 4,) on a less weight of food, gains 185 lbs. of flesh more than the Hereford ox, (No. 2:) but suppose that the difference of the breed should have had much influence in this instance, the difference between the two Devon oxen, (No. 3, and 4,) is very striking; for though the weight of food consumed by each is nearly equal, the latter gains 154 lbs. of flesh more than the former. Viewing the results of this experiment, therefore, merely as a test for proving the comparative degree of nourishment contained in these several species of food, and not as a proof of the relative value of the respective breeds of animals, (for which this experiment was made, and fulfilled the intention,) we could arrive at no satisfactory conclusion; because it still remains to be proved, whether another individual of the same breed as the ox, (No. 4,) might not have gained a greater proportion of flesh from the same weight of food as was consumed by the latter.

If the weight of nutritive matter which the chemical process shews these different species of food to contain, be now compared with the weight of flesh which the different oxen gained from it, the comparison will manifest the superior utility of this new mode of investigating the nutritive qualities of the food of these animals.

	Food consumed.		Weight of Nutritive Matter by the Chemical Process.						Weight of Flesh gained by the Oxen.			Difference between the Weight of Nutritive Matter and that of the Flesh gained.			
	lbs.		lbs.	oz.	dr.	cwt.	qrs.	lbs.	cwt.	qrs.	lbs.	cwt.	qrs.	lbs.	
No. 1. Hereford Ox.		oil-cake		—		2	0	20	1	2	27	0	1	21	in which the nutritive matter exceeds the flesh.
	2700	turnips	132	0	0										
	487	hay	112	0	0										
No. 2. Hereford Ox	423¾	oil-cake	116	8	0	3	0	14	2	3	25	0	0	17	in which the nutritive matter exceeds the flesh.
	3712	turnips	134	3	0										
	432½	hay	99	7	0										
No 3. Devon Ox.	438¼	oil-cake	120	7	3	2	3	12	3	1	0	0	1	16	in which the flesh exceeds the nutritive matter.
	2668	turnips	132	0	5										
	295	hay	67	9	10										
No. 4. Devon Ox.	412¾	oil-cake	121	8	0	3	0	18	4	2	14	1	1	24	in which the flesh exceeds the nutritive matter.
	2636	turnips	130	7	7										
	442½	hay	101	15	0										
No. 5. Sussex Ox.	432	oil-cake	118	12	0	3	1	9	2	3	18	0	1	19	in which the nutritive matter exceeds the flesh.
	2665	turnips	129	8	0										
	92	hay	125	0	0										
No. 6. Leicester Ox.	134½	oil-cake	119	7	0	3	1	12	2	3	14	0	1	26	in which the nutritive matter exceeds the flesh.
	652	turnips	129	0	0										
	400½	hay	127	9	0										

The only point assumed in the foregoing comparisons, is the quality of the hay, or the kinds of grasses that composed it; of which, in the account of the experiment quoted, no mention is made. Likewise, some linseed cakes are much more nutritive than others; I have found them to vary from 67 to 132 grains, in every 480 grains of cake. Those cakes which had the brightest texture when newly broken, afforded the most nutritive matter. The common field turnips also differ in the quantity of nutritive matter they afford, which is in proportion to the size of the roots, or according as their texture is solid or spongy: the largest roots contain proportionally the least quantity of nutritive matter, and the middle sized the greatest. These are minute circumstances in experiments on a small scale, but when conducted on a large scale, they become objects of magnitude. A nearer coincidence between the results of the two modes of experiment for the respective oxen, could not therefore be expected; but the total weight of flesh gained in this experiment, nearly agrees with the weight of nutritive matter contained in the food consumed by the oxen. The weight of the different kinds of food consumed, amounts to 20,656 lbs., which being of a middle quality, as assumed in the foregoing calculations, affords, by the chemical process, (see the Table,) 2020 lbs. of nutritive matter.

The total weight of flesh gained, is 2058 lbs.

It is therefore evident, that if the weight of nutritive matter contained in the various kinds of food employed in this experiment, had been previously ascertained as above, it would have shewn the weight of flesh which that food was capable of forming *under such circumstances*, with the difference only of 58 lbs. in 2058 lbs.

RURAL ECONOMY.

COTTON BAGGING—INQUIRY.

Jonesborough, Tenn. Jan. 3, 1826.

Mr. Skinner—I have been requested to ask for information respecting a simple machine which is said to be used in the vicinity of Lynchburg, Va. in spinning yarn and making cotton bagging. No mode occurs to me, by which I could more readily obtain the desired information, than application to you, with a request, that through the medium of your very useful and widely circulating journal, you will make known the wish of a distant subscriber. The particular machine which has been mentioned to me is owned by a Mr. Cundiff, near Chamoless' store, within 40 miles of Lynchburg. There are perhaps others of the same construction, in that neighbourhood and in other parts of the country. A single person spins with this machine, warp sufficient for 60 yards bagging in a day, at least so I am told. If some one of your subscribers or correspondents would so describe the machine, that it could be easily understood, I should be most thankful. And although I could not hope to have the opportunity of reciprocating the individual favour which would be thus conferred, yet would I be the willing instrument of rendering to another a similar service, should the person conferring the favour on me, consider the mode of discharging an obligation, sanctioned by the practice of the great Franklin, a sufficient return of his kindness.

Most respectfully yours,
D. A. DEADERICK.

LADIES' DEPARTMENT.

THE UNNATURAL MOTHER.

[*From the Sermons of the celebrated William Cobbett.*]

> "Even the Sea-monsters draw out the breast: they give suck to their young ones."
>
> Lamentations, ch. iv. v. 3.

Of all the sorrows known to mankind how large a portion, and those sorrows, too, of the most acute, arises from a deficiency of affection in children towards their parents! We daily see fortunes, the fruit of the industry and care of ages, squandered in a single year. We see fathers and mothers reduced to beggary, or made wretched during the half of their lives, by stubborn and profligate children; or, at the least, their last hours embittered by alarming apprehensions as to the fate of those children. The immediate causes of this misery are usually visible enough; but, the distant cause, the root of the evil, is seldom so clear before us, and is generally hidden from the parents themselves even more closely than from the rest of the world

The whole congregation of animated nature tell us with united voice, that it is the province of age to give instruction to youth, of the experienced to teach the inexperienced, and especially of the parent to train up the child. The lioness after having suckled her whelp, then brings it nourishment suited to its more advanced age, and leads it forth by degrees in search of its prey. The wren, having hatched her brood, first brings them their meals in her bill, then shows them how to peck, next how to take their flights, and, lastly, where to seek their food and how to provide for their security. Here the duties of these irrational parents cease, and, with them, perhaps, all recollection of the ties of consanguinity Not so with man. Here the ties continue, or ought to continue, in full force, and to be broken asunder only by the hand of death

We all know and acknowledge, that it is of the greatest importance to both parties, that children should receive good advice and instruction from parents. "Train up a child in the way he should go, and when he is old he will not depart from it." Prov. ch. xx. v. 6. Indeed, without the instruction of parents what are children? Little better than wild animals But, to be able to instruct, you must find in the child *a disposition to listen to instruction;* and, to be aided by this disposition you must have the *deep-rooted affection* of the child; and, to be deep-rooted, it must have been implanted at an early age. The days of the rod soon pass away. Law, interest. *force* of one kind or another, may restrain for a season; but the power of these has its end; and then, if there be not filial affection, the foundation of which is deeply laid in the breast, the parent has no power. Even the brightest example loses half its force, if unsupported by this affection.

This being, then, an object of such vast importance, ought we to neglect any of the means necessary to the securing of it? Ought we to neglect any of those duties on which our own happiness as well as that of our children so mainly depend? Ought we to neglect those things which are manifestly calculated to make our children always listen to us with attention and respect, and to yield us cheerful obedience.' What to parents are, or at least ought to be, all other enjoyments, compared with those which arise from the love of their children towards them?

Yet, we are not to expect this love without deserving it; without doing those things which are calculated to inspire it and keep it alive. This love is of a *nature* very different indeed from that which we feel towards those not connected with us by ties of blood: they arise from sources wholly different. The latter is inspired by a look or a sound; the former must have *habit*, and early habit, too, to insure its existence in a degree that can render it a motive of action. There is nothing in the form or the features or voice or motion of the parent to awaken or preserve love in the child. To possess this, therefore, there must be a series of the kindest acts on the part of the parent, beginning even before the child can speak, and never ceasing but with the parent's latest breath. To say to a son, *I am your parent*, is very little. If his own heart do not tell him this, you may as well hold your tongue.

Children are born with dispositions widely different, and are to be treated in a manner suited to those dispositions But, one thing is applicable to all cases; and that is, that every child ought to be treated with as much kindness and indulgence as is compatible with its own good, and that parents have *no right* to follow their own pleasure or amusements, if, by following them, they neglect their children. They have brought them into the world by their own choice; and, having done that, it is their *first duty* to watch over their infancy with incessant care. They are not to shift those cares to others. These are duties not to be performed by deputy; or, if they be, let not the parents complain if the child's affection follow the performance of the duties.

If this be the case with regard to those duties which may, without any positive violation of the *laws of nature*, be performed by deputy, what are we to say of that species of neglect, or, rather, that species of parental cruelty, alluded to in the words of my text! If "even the *sea monsters* draw out the breast and give suck to their young ones," what are we to think of those *mothers*, and mothers pretending to *religion* too, who cast off their children to draw the means of life from a hireling breast?

In an act of this sort there are injustice, cruelty, baseness, grossness, and all in the extreme degree. The mother's milk is the *birthright* of the child. It is his by nature's decree. Nothing can supply its place. It is a physical impossibility to find another breast precisely suited to his age, his appetite and constitution. Indeed, without his *own* breast, he is but half a child. Besides, even if another breast be found to supply, in some measure, the place of that of which he has been defrauded, it must be to the *injury of another*. Another must be ousted from his birthright to make room for the interloper. There must be *two castoffs*; two violations of the law of nature; two unnatural mothers. What must she be who can cast off her own child, and, *for hire*, transfer her breast to another; and, what must she be, then, who, without any temptation, other than her own gross propensities, can commit her child to the care and the breast of such a hireling!

The cruelty of such a transaction scarcely admits of adequate description. To inflict pain unjustly is cruelty; and, what pains are not inflicted on these banished children! He who is the most fortunate; he who gets the breast, is compelled to swallow what nature did not design for him. Ailments, sufferings, torments of every kind assail even him, while, at the same time, he has no *mother's care* to alleviate his sufferings. But, what becomes of the child of the hireling? He has neither mother nor breast. He is left to take his chance on food wholly unfit for him; and is, in fact, exposed to die, for the sake of the money for which his birthright has been sold! And, is this tolerated, or winked at, by that code of laws, which hangs the girl, whose dread of shame and reproach induces her to put an end, at once, to the life of the result of her amours? The crime, in this case, is more *shocking* than in the other, but, is the *wickedness* greater? If we take the motives, in the two cases, fairly into view, we shall see that the heart of her, who destroys her new born babe, though that heart must be hard enough, may be *less flinty* than that of her who banishes her infant from her breast, in the one case for the sake of *money*, and, in the other case, for purposes *too gross*, too filthy, to be named.

It is a crime, and a crime which the law justly and invariably punishes with death, or with something little short of death, to expose an infant to the manifest hazard of perishing. And, is not every infant *thus exposed* that is robbed of its mother's milk? And, shall such robbery be regarded as no crime at all? If an infant *die* from wilful exposure to wet or cold, is not the act of exposure deemed *murder*, and is not the guilty party put to death, and that, too, with the approbation of all mankind, who, on such occasions, have no pity for the *unnatural mother?* But, is she actuated by the fear of the displeasure of parents, by the dread of shame and ruin; is she more unnatural, is she, indeed, nearly so unnatural as the mother who, without these strong temptations, without any temptation at all, other than those of the most gross or most sordid description, exposes her infant to die a lingering death, to imbibe disease and feebleness instead of health and strength; who lets out to hire or dries up the fountain from which God and nature say her infant is to draw the means of existence and of vigour.

The *baseness* of the banishing mother is equal to her cruelty. The creature on whom she inflicts certain suffering and probable death, is *wholly helpless*. He has no friend, no defender, no protector, no one to plead his cause. The callow mouse or the naked bird is not so friendless. No? Has he no *father?* None; for that man is unworthy of the name, who can suffer so foul, so base an act of injustice. Before the babe can be banished from its birthright, father, mother, kindred, all must be base. Look at its little hand, not so big as the top of your thumb; its fingers the size of straws; hear its voice smaller than the softest sounds of the lute, see it turning for the means of life to the limpid and pure stores formed by nature; stand by while its little mouth is taken thence and placed at the nauseating hired mess, and then add hypocrisy to cruelty by calling yourself its *father!*

And what is the *motive* to the commission of this unnatural crime? For *what reason* is it that the rich mother deprives her child of his birthright? Can she give any? *Dares* she give any? The motives are two in number; the one, that her *beauty* may not suffer from the performance of her most sacred duty; the *other*, too gross, too beastly to be named, except within the walls of a brothel. Let it be observed, however, that as to the first motive, it is pretty sure to *fail*, if beauty be valued on account of its power over *the husband*. For, the flame of love being past, the fire is kept alive by nothing so effectually as by the fruit of it; and what becomes of this, if the child be banished to a hireling breast? Of all the things which attach husbands to wives, that make the chain bright as well as strong, is the frequent, the daily, the almost hourly contemplation of that most beautiful and most affecting and endearing of all sights, the infant hugged in the mother's arms and clinging to her breast. The prophet Isaiah, in announcing the promise of God to his people, has recourse to the figure of mother and child: "Then shall ye suck, ye shall be borne upon her sides and be dandled upon her knees."

Those who drive from their bosoms the fruit of their love, drive away the love also, or, at least, the best guarantee for its duration. She who closes the fountain of life against her offspring is not a *mother*, and is only *half a wife*. It is not the *exterior* of that fountain that is the real cause of its being an object of admiration. The prophet Hosea, in calling for a *curse* on the desperately wicked, exclaims: "Give them, O Lord; what wilt thou give them?" He hesitates here, as it were to consider, and to think of something peculiarly mortifying and degrading, and then proceeds "Give them a miscarrying womb and *dry breasts*." This curse, this degradation, the unnatural mother voluntarily inflicts upon herself, and, in doing this, she breaks in sunder the strongest tie that holds to her the heart of her husband. Let the most beautiful woman in the world be placed before a man of twenty two; see him dying in love for her; give him to know of a certainty that her breasts will be always *dry*: a train of disgusting ideas rush through his mind, and he, if not the grossest of mankind, is cured in a moment.

It is the interior and not the exterior of the female breast, it is the *thought*, and not the *sight*, that makes the charm. The object of which we are speaking is delightful from first to last. It is one of the things which God has given to man as a reward for his toils and his cares, as a compensation for the numerous troubles and anxieties of life. But I appeal to the husband and father, whether that object has ever, at any stage of life or under any circumstances, appeared so charming in his eyes as in those moments when met by the lips of his child, and whether his wife was ever so close to his heart as when smiling on the babe at her breast.

(To be continued.)

MISCELLANEOUS.

FOR THE AMERICAN FARMER.

METEOROLOGICAL OBSERVATIONS.

Washington, Pa., Jan. 17, 1826.

1825.	Greatest cold.	Greatest heat.	Medium temperature at 1 o'clock.	Depth of rain.	Number of days on which rain fell	Number of days which snow fell.	GENERAL OBSERVATIONS.
January,......	16	54	39 7-10	0 7 10	2	8	The *driest* January within the recollection of the oldest inhabitants.
February,....	8	58	43	3 7 10	10	8	On the 17th, a violent hail storm, accompanied with thunder and lightning.
March,.........	22	73	51 5-10	6 5-10	12	-	On the 26th, peaches in bloom; 29th, martins appeared; vegetation very forward.
April,...........	32	79	67 9-10	0 6-10	3	-	On the 8th, apples in bloom; 21st, much fruit destroyed by frost, as peaches, cherries, &c.
May,.......	38	88	74 5-10	5 1-10	10	-	On the 3d, swallows appeared; 10th, a very destructive hail-storm, many fields of rye destroyed, much glass broken.
June,.......	56	92	84 8-10	3 2-10	6	-	On the 10th, early potatoes ripe; 23d, barley; 25th, rye; 27th, wheat; 22d, hay harvest commenced.
July,..........	63	97	83	4 7-10	9	-	On the 18th, green corn in market.
August,........	55	93	82 7-10	4 7-10	9	-	On the 2d, water-melons ripe; 3d, musk-melons; 18th, grapes.
September,..	44	86	72 7-10	2 1-10	8	-	On the 9th, white frost.
October, ...	26	87	67	0 5-10	3	1	Weather generally mild.
November,...	20	70	51 2-10	0 4-10	3	2	Latter part of the month cold, with high winds; very dry and severe on fall grain.
December,...	9	48	34	1 4-10	5	5	Generally, cold and stormy.

The temperature for the year at 12 o'clock, 63° nearly; being 7 5-15 warmer than 1824. 19th July the warmest day, thermometer 97°. On the same day the mercury stood higher in Paris, than on any other in the year. The season throughout warm, fruitful, and remarkably healthy; neither fly, smut, nor rust, disturbed the farmer. Harvest commenced, generally, about twelve days earlier than in 1824. Very few sudden changes of temperature. We had abundance of spinach, fit for use in February and March. The *Rosa multiflora* remained perfectly green all winter; and the most tender kinds of grapes were uninjured, although exposed during the whole year. December 23d was the coldest day—thermometer at 9°. The whole depth of rain which fell during the year, 2 feet 9 6-10 inches—average for each month 2¾ inches.

[It is much to be regretted that we cannot get from each state, an annual table similar to the above.—Ed. Am. Far.]

PATENTS.

[We are glad of the opportunity to record the following, believing that it may save much trouble and expense to inventors, authors, &c.]

Patent Office, March 5, 1811.

Having the honour of directing or superintending the important duties of issuing patents for arts and inventions, I have thought it a duty to my fellow citizens to publish a few lines of information, to facilitate the mode of acquiring patents, by which many may be enabled to dispense with long journies to the seat of government, or troubling their friends with a tedious correspondence.

Viewing with astonishment the inventions of my countrymen, I cannot contemplate them without being impressed with the idea, that no nation on earth surpasses them in genius. Even the unlettered inhabitants of the forest have perfected inventions that would have done honour to Archimedes; and I reproach myself for not having published, long ago, a few directions how to proceed in securing the advantages of the efforts of their talents.

Before an application be made for a patent, I would advise the inventor to examine well the Dictionaries of the Arts and Sciences, the Repertory of the Arts, and other publications that treat of the mechanic arts, to endeavour to ascertain if the invention be new; also to make inquiry, of scientific characters, whether or not the invention or discovery be practicable. These previous inquiries will sometimes prevent great trouble, and save the expense of much time, labour and money; for a patent does not confer rights where just claims do not exist; and as there is at present no discretionary power to refuse a patent,[*] even where no just claim exists, it may appear proper to caution the purchaser of patent rights against the supposition that the invention patented, is always valuable or new, or that it interferes with no previous patent. The respectable names of the President, the Secretary of State, and Attorney General, are requisite to give validity to a patent; but ought never to be considered as an evidence of the originality or utility of the invention. The issuing of patents is grounded, not only on a desire to promote the progress of the useful arts, but also to prevent the loss of valuable secrets; for many have been buried with the inventors, previous to the organization of this system of protection for the property of talent, mind and genius. Formerly the arcana of any profession were withheld from the tyro; his initiation was gradual and secret, and the caution with which inventors worked, to prevent the infringement of unprotected rights, confined many important inventions to limits too narrow to materially benefit the inventors or the world; at present the law grants a monopoly to the inventor for a limited time, provided the art, invention, discovery, or machine, be truly explained, deposited and recorded, for the benefit of mankind, when the time limited has expired; and the patent is not only an evidence that the inventor has formally confided his secret to the publick, but also a declaration of the protection of the right from infringement: nevertheless, of the infringement of the right, by others, a jury of the country is only competent to decide.

As it can be mathematically demonstrated that no human invention can produce a machine capable of undiminished power, or power regenerating itself, and forming what is called a perpetual motion, an *operative model* will be demanded for every such attempt, before a patent can be granted: otherwise no proof can be given of its being what its name designates, and for which a patent is demanded. It is hoped this will prevent many ingenious, but unlearned men, from attempting what the scientific know to be impossible. Some set out by searching, through levers and large wheels, to increase power; forgetting that this is to diminish velocity—then they multiply and diminish the power to give velocity; this brings them to the point whence they set out—thus it is considered as an axiom in mechanics, that to increase power is to diminish velocity, motion or action, and vice versa. They must also consider that man, in all his operations, works against gravity and friction. A perpetual *motion* is therefore only considered as a perpetual *notion;* and ought never to be attempted till the sun rise in the west!

The general law concerning the issuing of patents will be found in the second volume of the laws of the United States, p 200. This law provides for citizens only; but a subsequent law (vol 5th, p. 88,) provides also for applicants who have resided two years or upwards in the United States, and who are not citizens.

In applying for a patent, it is necessary to attend to every legal form; for, in consequence of inattention to forms[*] only, some of the patents issued formerly, have, in courts of law, been declared to be null and void.

MODE OF APPLICATION.

Every[†] inventor, before he presents his petition to the Secretary of State, signifying his desire of obtaining a patent, shall pay into the treasury of the United States thirty dollars,[‡] for which he will be furnished with duplicate receipts, one of which he shall deliver to the Secretary of State, when he presents his petition; and the money thus paid shall be in full for the sundry services to be performed in the office of the Secretary of State consequent to such petition. This petition must be addressed to the Secretary of State, and may be in the following, or in a similar style:

To the hon. —— ———, *Secretary of State of the United States:*

The petition of A. B. of ————, in the county of ————, and state of ————, respectfully represents:

That your petitioner has invented a new and useful improvement ["or[§] *art, machine, manufacture or composition of matter, or any new and useful improvement in any art. machine, manufacture, or composition of matter,*] in ————, not known or used before his application," the advantages of which he is desirous of securing to himself and his legal representatives; he therefore prays that letters patent of the United States may be issued, granting unto your petitioner, his heirs, administrators or assigns, the full and exclusive right of making, constructing, using and vending to others to be used, his said improvement, (*art, invention, machine, manufacture or composition of matter, &c.*) agreeably to the acts of Congress in such case made and provided; your petitioner having paid thirty dollars into the treasury of the United States, and complied with other provisions of said acts.

A. B.

The *specification* or description of the machine, art, discovery, or invention, must be given in clear and specific terms, designating it from all other inventions, and describing the whole in such a manner, as to comprehend not only the form and construction, (if a machine,) but also the mode of using the same; and if it be only an improvement on a certain machine already invented by the applicant or any other, it ought to be so mentioned or described; and as this specification, description, or schedule, enters into and forms part of the patent, it must be without any references to a model or drawing, and must be signed by the applicant or applicants, before two witnesses. It is material that this be in good language, and correctly written, as it is transcribed into the patent, and the original papers will be deposited in an office, that will hand them down to posterity; by which the honour of the country is concerned in this attention. The modest inventor will, no doubt, exclude those panegyrics on the excellence of his invention or discovery, which abound sometimes in the productions of the inferior genius, but which ought not to enter into the patent.

The following, or a similar oath or affirmation, taken [before a judge of any of the courts, or a justice of the peace, or any person qualified to administer an oath,] by the applicant or applicants, must be subjoined to the specification, if citizens of the United States.

FORM.

County of ————, }
State of ————, } *ss.*

On this ———— of ————, 182 , before the subscriber, a Justice of the Peace, in and for the said county, personally appeared the aforenamed A. B. and made solemn oath [or affirmation] according to law, that he verily believes himself to be the true and original inventor or discoverer of the art, [machine, invention, or improvement, composition of matter, &c.] above specified and described, for ———— (mention here the object or intention) ————, and that he is a citizen of the United States.

————, *Just. Peace.*

If not a citizen (or citizens,) the following addition must be made to the declaration: "that he verily believes himself to be the true and original inventor or discoverer of the art, &c. [*]*And that the same hath not to the best of his (or her,) knowledge, or belief, been known or used either in this or any foreign country.*—" "Also. that he (or she,) hath resided in the United States for two years and upwards."

It is not necessary that the time of residence should immediately precede the application.

If any inventor or discoverer should die intestate before an application be made for a patent, his legal representatives may apply for the patent, in trust for the heirs at law; otherwise in trust for the devisees.[†]

The specification must be accompanied by a good drawing, in perspective, of the whole machine or apparatus, "where[‡] the nature of the case admits of drawings, or with specimens of the ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention is of a composition of matter. "And such inventor shall moreover, deliver a model of his machine, provided the secretary shall deem such model necessary." It is requested, in giving a drawing of the machine, to give also sectional drawings of the interior, when the machine is complex, and every drawing should be accompanied with explanatory references. If the machine be complex, a model will likewise be necessary, not only to explain and render comprehensible to a common capacity, but also to prevent infringements of rights; for many will plead ignorance of drawings, who cannot avoid conviction by wheels and pinions.

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[*] Except in the cases of interfering claims, till such claims have been settled by reference, according to the 6th section of the Law, vol. 2, p. 204.

[*] Oliver Evans' was among the number.

[†] See Laws of the United States, vol. 2, chap. xi. sec. 11, p. 205.

[‡] Notes of the Bank of the United States.

[§] 1st section of the above, p. 200.

[*] Laws of the U. S. vol. v. chap. xxv. p. 86.

[†] Laws of the U. S. vol. v. chap. xxv. sect. 2, p. 86.

[‡] Ibid. vol. ii. chap. xi. p. 202.

The drawings ought not to exceed a quarto size, and if confined to octavo they would be still better, where it can be done conveniently and distinctly.

Many of the drawings in this office are executed in a very handsome style, and do much credit to the gentlemen whose names are ascertained. If the artists would always sign them, with their directions, information might be given to the applicants for patents, where to apply for drawings.

The papers must be all sent directed to the Superintendent of the Patent Office, under cover to the Secretary of State, which of course renders them free of postage, but if models be sent, their freight or carriage hither must be paid, and before packing them, the name or names of the inventor or inventors should be written thereon, with the name of the machine, and the date, for, sometimes on receiving them, it is difficult to know to whom they appertain.

The Congress being impressed with a high sense of the value of the inventions of our citizens, have purchased an elegant and extensive building, wherein preparations are made for the accommodation of a very numerous collection of the machines illustrative of the ingenuity displayed; and this *Museum of the Arts*, it is presumed, will stimulate the ingenious to send the models of their machines and inventions in a style that will rather honour than discredit themselves and our country.

Copy rights of books, prints, charts, maps, &c. are secured "by* depositing, before publication, a printed copy of the title of such map, chart, book, or books, in the clerk's office, of the district court, where the author or proprietor shall reside, who will record the same; and the author or proprietor shall, within two months from the date of the record, cause a copy of the said record to be published in one or more of the newspapers printed in the United States, for the space of four weeks. And if a map or chart, shall cause the following words to be impressed on the face thereof, viz: Entered according to act of Congress the —— day of ——, 182 , [here insert the date when the same was deposited in the office] by A B of the state of ——, [here insert the author's or proprietor's name, and the place and state where he resides.] ——. Any person wishing to republish a copy-right book, print or map, must first obtain leave in *writing* from the proprietor, signed before two witnesses, and any person publishing a map, print, &c. without first complying with the law, is liable to a penalty of 100 dollars.

Within six months of publishing the map, chart, book, or books, the author or proprietor shall deliver, or cause to be delivered, to the Secretary of State, a copy of the same, and, when deposited and entered in the Department of State, a certificate will be returned of its being received.‡ This will secure the sole right of publication, fourteen years, to the author or proprietor, if a citizen of the United States, or resident therein. "And, if at the expiration of the term, the author or authors, or proprietors, or any of them, be living, and a citizen or citizens of these United States, or residents therein, the same exclusive right shall be continued to him or them, his or their executors, administrators, or assigns, for the further term of fourteen years: provided he or they shall cause the title thereof to be recorded and published† in the above manner, within six months before the expiration of the first term of fourteen years aforesaid." In securing designs for paper hangings and ornaments for rooms, &c. a specimen of each should be deposited in the clerk's office, where the inventor resides, who will describe, in writing, all the ornaments, and the colours used in each, so as to designate them with the changes that are proposed to be used in changing the ground and general tint. Let each paper thus described, be numbered 1, 2, 3, &c. and after entering them in the clerk's office, and publishing them as directed, let a specimen of each be sent to the hon. the Secretary of State, or through him to the person who directs the patent office, with corresponding descriptions and numbers; and a certificate of such a deposit will complete the requisitions of the law in securing the exclusive right to each original production of genius.

WM. THORNTON.

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* See an act for the encouragement of learning, &c. Laws of the U. S. vol. [illegible], chap. [illegible], sect. 3, p. 121.

† Laws of the U. S. vol. 1, sect. ii, p. 1[illegible]2.

‡ Laws, vol. [illegible] p. 11[illegible] 118.

TO MAKE COMMON INK.

3 ounces of powdered Galls,
1 ounce of Copperas,
1 ounce of rasped Logwood,
1 ounce of Gum Arabic.

To be put into 1 quart of soft water, and suffered to remain 8 or 10 days, and to be shaken before use.

The above is by Dr Lewis, an English Chemist of eminence, and has been recommended by scientific men in this country.

New England Farmer.

THE MATHEMATICIAN'S SCALE.

In this scale most of the properties of all other mathematical instruments are united, and it is so constructed that any problem in trigonometry can be solved without drawing parallel lines or having recourse to any other instrument. Latitude, departure, course and distance, can be found with accuracy by only turning the scale.

The description of the scale is as follows, viz: First, a circle marked on both sides in the following manner.—The side on which the limb of the scale turns is marked with the line of chords; the other side has the lines of chords, sines, tangents, semitangents, and secants, which plainly demonstrate the use of those lines. On the centre of this circle, is annexed a limb of the scale which turns on a pivot, and reaches with one end to the line of chords at the edge of the circle, which gives the course, and extending with the other through a cross limb and a segment of circle which slides on this limb to the circle; this limb has the line of equal parts; the cross limb has the line of equal parts and the line of numbers, the segment has the line of equal parts only, the cross limb forms a right angle with the limb which turns on the centre of the circle, so by the circle the course is given, and by this cross limb the distance; above this turns a straight limb marked with a line of equal parts, which by turning gives latitude, departure, course and distance. The construction of the scale is very simple, so much so, that any common person could in less than half a day learn the use of it so as to solve any question in trigonometry with accuracy, and give latitude, departure, course and distance.

Recommendations.

Having examined the model of a mathematical instrument, constructed by Mark Twichell, we do not hesitate to express the belief that one made with accuracy on this principle, would tend greatly to facilitate calculations in trigonometry and navigation, and would also be very useful in drafting, &c.

(Signed) B. HALLOWELL,
C. FARQUHAR,
Principals of Alexandria Boarding School.

We agree with B. Hallowell and C. Farquhar, in the above opinion.

J. ROBERDEAU,
Board of Topographical Engineers.
JAMES D. WOODSIDE,
Mathematician.
WM. THORNTON,
Patent Office.
JOHN M. MORSE,
General Land Office.
C. SCHWARTZ,
Draftsman of Navy Board.

Having examined the model of the instrument above mentioned, it is with great pleasure that I certify that the instrument can be used with great advantage for many useful purposes in surveying, drafting, and also the plotting of surveys, &c.

BERNARD,
Brig. Gen. and Member of the Board of Engineers.

The subscriber would sell the right of making and selling the above named instrument, on very reasonable terms to the purchaser; a letter addressed to this office would be attended to, or the subscriber may be seen by calling at Griffith Jones, watch maker, Market street, Baltimore.

MARK TWICHELL.

January 19, 1826.

From the Portland, (Maine) Patriot, Jan. 20.

Mr. Editor—I observed in the Eastern Argus, of the 3d inst. a very interesting obituary notice (of my deceased friend) John Allen, M. D. of Saco. As it is characteristic of Methodist divines to own good horses, I will note the following paradox.

When the late Dr Allen located himself in Saco, in 1795, he owned a bay mare six years old. In April, 1797, I accompanied him from Scarborough to New Gloucester. The mare had a long body, a black mane, and a switch tail of the same colour. She was a natural trotter, of a low carriage, good limbs, and a safe traveller. About the year 1800, Dr. A. disposed of this mare to a Mr Warner, of New Gloucester, in exchange for a white stud. Mr. W. sold the mare to Peleg Chandler, Esq. of New Gloucester, who owned her until she was twenty-four years old, when he sold her to John Loring, Esq. of Buckfield.—And about two years after, a jockey from the vicinity of Boston appeared at New-Gloucester, in pursuit of a speedy trotting horse. The old swingletail (so called) was recommended. The jockey proceeded to Buckfield, and purchased her for the sum of $130 (she being twenty-six years old) and proceeded to Boston; and after graining her a sufficient time, offered her as a match to any other on the turf. She won a purse of $500, and succeeded as a trotter against all others. From Boston she was taken to New York, where she remained unrivalled, until she was sold for $1100 to an English gentleman, who exported her to Liverpool in England.

A TRAVELLER.

SPORTING OLIO.

ON DOG-BREAKING.

In the first place, it is indispensably necessary that the sportsman should procure dogs whose breed is unexceptionably good, as well bred dogs are more than half broke the moment you take them into the field. The dog is an animal possessed of an uncommon degree of sagacity,—in short, he has *reasoning powers* to a very great extent, which may be converted to the pleasure or the service of his master; yet, in this respect, dogs will be found to vary very much; and while some will appear to exhibit *instinct* merely, others will be found to evince a degree of acuteness very similar to reason. There is a countless variety of the dog tribe, many of the non-descript ramifications of which, with an ugly and diminutive form, seem to sink much below the general level of the canine tribe in sagacity, while the nobler kind appear to rise in the scale of importance in proportion as they are judiciously bred, and afterwards cherished by the fostering care of their humane protector. But the most sagacious of all the varieties of this highly interesting animal is, without dispute, the *Newfoundland dog.* His olfactory organs are of the first order; yet, as from his heavy, long, and loose form he is unable to support the fatigue of a day's range, he, on this account *alone*, is ill-calculated for the shooting sportsman. Similarly important disqualifying observations would apply to most of the other varieties of the dog, till we come to the *pointer* and *setter*, which appear altogether most admirably adapted to the purpose for which they are so generally used. We may, however, remark that the mere pointing or setting is by no means confined to these two particular kinds; on the contrary, terriers, hounds, and all dogs inclined to hunt, may be easily taught to *point* or *set*, or in other words, to pause or stop, on their approaching game. Indeed, there are few dogs given to hunting but will point *naturally*, in the course of a little time, which arises no doubt from the following reason: as a young dog ascertains his proximity to game by his sense of smell, so, on his near approach, he is eager to seize it; but finding, after repeated trials, that he is unable to accomplish his purpose, he becomes more circumspect or wary, and will be observed to *pause* for a short space, and then make a sudden rush to secure his object. This pause is, no doubt, for the purpose of ascertaining, by his olfactory organs, the exact spot where the game is seated; and the observation of this very circumstance, there is not a doubt, originated the idea of the setting dog; the sportsman carefully improving, by education, a quality which he easily discovered would so essentially conduce to the pleasures of the field.

Taking it for granted, therefore, that all dogs which will range for game will naturally pause or set, yet none of the various kinds seem so quickly to adopt this sagacious manœuvre as the pointer or setter; nor is any one of them every way so admirably adapted as an auxiliary to the fowling-piece. Next to the Newfoundland dog, on the score of powerful instinct, or animal reasoning, may be ranked the *pointer;* his countenance is open, intelligent, and expressive; while his speed, strength, and persevering spirit enable him to continue the chase for a length of time almost incredible.

The *pointer* and *setter*, though used for the same purpose, offer, individually, a very different object for contemplation, either as regards their external appearance or their mode of questing for game. Speaking on this subject, the author of the "Shooter's Companion" observes,—"The *setter* is the handsomest and the most generous of the canine race; but by what peculiar cross he originated is unknown; and all conjectures on this head, though very interesting to the sportsmen, are too much involved in uncertainty to be, for a moment, depended on." The setter is fleeter than the pointer; and, as his feet are small and much protected by hair, he has a decided advantage on hard ground, or in frosty weather; but, at the commencement of the shooting season, when the weather is oppressively hot, he suffers more from thirst than the pointer, arising, no doubt, from his long, thick, and warm coat of hair, which, though extremely convenient in cold weather, nevertheless, exposes this generous animal to great inconvenience during the intense heat of the month of August, particularly on mountains where water is seldom to be met with. On the whole, the setter is a hardy, high-spirited animal; but he is often found troublesome to break, and can only be kept steady by incessant labour, backed, but too frequently, by *severe correction.* For those who follow the diversion very ardently, and are out almost every day, the setter will frequently be found a valuable acquisition; but they who enjoy the fascinating amusement of shooting only *occasionally*, will find greater satisfaction in the more steady and better regulated exertions of the pointer

The *pointer* is of foreign origin, and is known, with but slight difference of form, not only in Spain, but in Portugal, and, also, in France. The pointers that have been brought immediately from Spain are heavy and clumsily formed; those from Portugal are somewhat lighter; while the French breed is remarkable for a wide furrow which runs between the nostrils, and which gives to the animal's countenance a very grotesque appearance. All the pointers, however, exhibit a very different form and character from the setter: they are thick and heavy creatures, with large chubby heads, long pendant ears, and are covered with short smooth hair; nor do they always possess that generosity of disposition which is so distinguishing a trait in the character of the setter; in fact, they are of little value till crossed with the more generous blood of these islands. Yet the conjunction of the setter and the pointer is by no means advisable, since the production generally unites the worst qualities of the two, without any of those requisites, perhaps, for which the two breeds are most highly prized. Sometimes, indeed, a first rate dog is produced between a setter and a pointer; but it rarely happens: the cross, at best, is never to be depended on; and for one good dog thus obtained, there will be found, on an average, twenty very indifferent or bad dogs; while not the least dependence can be placed on the offspring of the very best animals thus obtained. The most valuable dogs are, unquestionably, those produced between the Spanish pointer and the deep flewed foxhound or deep-flewed harrier, particularly if the progeny incline much to the pointer; unless, indeed, speed be more the object than acute olfactory nerves, when the lighter kind of hounds will be found to answer best. The *Spanish pointer* has been already so judiciously crossed, and is arrived at such a degree of perfection, as to leave little to be desired in the way of experiment;—good pointers are now to be met with in all parts of the kingdom. Pointers are very susceptible of education, are easily broke or trained, and not so apt to forget their lessons as the setter.

Having offered these preliminary remarks on the varieties of the dog, I will now proceed to a consideration of the subject more immediately under discussion A very mistaken notion has obtained currency among sportsmen, namely, that those dogs which it is difficult to reduce to the required subordination, ultimately prove, when thoroughly subdued, superior to all others. How such an idea could have become prevalent I am at a loss to conjecture; but I have not the least hesitation in pronouncing it erroneous. That there have been good dogs of this description I am willing to admit,—one, perhaps, out of a hundred; but it must be acknowledged, after all, that the steadiness of the very best of these hardy, headstrong dogs is seldom to be depended on; they are always apt to spring the game, particularly when hunted in company; and it is only by hard labour, or excessive correction, or both, that their mischievous impetuosity can be restrained.

The *first* object to be considered in training a dog is the *animal's temper:* some dogs require frequent and severe correction, while, with others, mild treatment, and even encouragement, are indispensable. The most *philosophic patience* is an admirable quality in a dog-breaker; as many otherwise excellent dogs have been ruined by ignorance and brutal passion.

Well-bred dogs generally begin to hunt at an early period, though it will sometimes happen (but not often) that a dog will continue so long before he manifests a disposition for hunting, as to induce a suspicion that he is good for nothing Let no sportsman be too hasty in making this conclusion. At the age of five or six months, or even earlier, you should allow your dog to accompany you when you walk out, supposing it to be in the lanes or elsewhere; and, occasionally, lead him in a cord, or couple him with another dog. He may be allowed to ramble to a certain distance, so as not to be out of call; occasionally, making him come behind you at the word *back.* The fewer words that are used in each lesson the better, which should be always the same, of the plainest sound, as well as the most distinct from each other, as the dog is guided by the sound alone; any meaning beyond what the sound and tone convey is, of course, above the capacity of a quadruped. At this period, it will not be amiss to teach him to crouch at a piece of bread, or any thing else you may think proper, and not to stir till he is ordered: this may be easily done by *gentle correction* when he does wrong, and by rewarding him when he has done right. A good time for this introductory lesson is before you feed him, and he should never be allowed to eat till he has performed his task in a satisfactory manner. The word *down* is short, and sounds well from the mouth, and is all that is necessary to make the dog crouch, except when he shows any unwillingness to execute what you desire, when *sirrah!* spoken in an angry tone, may perhaps produce obedience; if not, the whip should be administered with moderation. Further, it may be as well to teach him, at the same time, words of caution, such for instance, as *take heed;* as well as of encouragement, as *good boy;* the latter should not be *used profusely*, but applied in the most judicious manner, as encouragement is very apt to induce a dog to commit errors. A plurality of teachers should, if possible, be avoided, one instructor being amply sufficient. Whenever a dog is corrected, either at this period or afterwards in the field, he should not be suffered to leave you till he is satisfied that you intend him no further chastisement: for example, if a dog be guilty of so great a fault, when hunting, as to render a severe flogging indispensable, you should not allow him immediately to run away after the flagellation, but compel him to remain at your feet for some seconds or a minute, otherwise, you will not be able to catch him, perhaps, should he require a second chastisement. When a severe flogging is necessary, it is advisable to put a cord round the neck of the dog, by which means the punishment may be administered more effectually.

After the dog has been thus brought under subjection, or reduced to the requisite obedience, at any period, from the age of eight to eighteen months according as he is strong and healthy, he may be taken into the field, either with or without another dog, and suffered to hunt whatever he pleases, (except sheep or domestic animals,) and, in fact, to run riot. *Larks*, as they so frequently present themselves, will, most likely, be the first object of his attention; these he will spring and chase very eagerly; if *partridges* come in his way, he will do the same, with this difference only, that his eagerness will much increase; it will be still greater should he come in contact with a *pheasant;* and if a *hare* happen to rise before him, he will not fail to chase, with all imaginable ardour, and will, most likely, *open* in the pursuit In this way he may be indulged till such time as he has become so attached to the sports that he may be checked without the least danger of his being *overfaced*, and thus induced to *blink* his game, or be otherwise rendered shy.

(To be continued in our next.)

A Child carried away by an Eagle.

A circumstance quite uncommon in the north, lately happened in Scania. A woman at work in the fields laid her infant on the ground, at a little distance: soon after an eagle pounced upon the infant, and carried it away. The poor woman, who heard the cries of the child in the air, is become insane, and is now in the hospital at Malmoe.

[*Hamburg paper.*

RECIPES.

TO DRY SALT BEEF AND PORK.

Lay the meat on a table, or in a tub with a double bottom, that the brine may drain off as fast as it forms, rub the salt well in, and be careful to apply it to every niche; afterwards put it into either of the above utensils; when it must be frequently turned, after the brine has ceased running, it must be quite buried in salt, and kept closely packed. Meat which has had the bones taken out is the best for salting. In some places, the salted meat is pressed by heavy weights or a screw, to extract the moisture sooner.

TO PICKLE IN BRINE.

A good brine is made of bay salt and water, thoroughly saturated, so that some of the salt remains undissolved; into this brine the substances to be preserved are plunged, and kept covered with it. Among vegetables, French beans, artichokes, olives, and the different sorts of samphire, may be thus preserved; and among animals, herrings.

TO SALT BY ANOTHER METHOD.

Mix brown sugar, bay salt, common salt, each two pounds; salt-petre eight ounces, water two gallons; this pickle gives meats a fine red colour, while the sugar renders them mild and of excellent flavour. Large quantities are to be managed by the above proportions.

SUBSTITUTE FOR YEAST.

Boil one pound of good flour, a quarter of a pound of brown sugar, and a little salt, in two gallons of water for one hour; when milk-warm, bottle it and cork it close; it will be fit for use in twenty-four hours. One pint of this will make 18 lbs. of bread.

TO RESTORE BAD YEAST.

Mix with it a little flour, sugar, salt, brandy, and beer, and these will confer on it the qualities of good yeast. Good yeast may also be made by adding the same mixture to the grounds of ale.

TO RESTORE DECAYED WRITINGS.

Cover the letters with phlogisticated or prussic alkali, with the addition of a diluted mineral acid; upon the application of which, the letters change very speedily to a deep blue colour, of great beauty and intensity. To prevent the spreading of the colour, which, by blotting the parchment, detracts greatly from the legibility, the alkali should be put on first, and the diluted acid added upon it. The method found to answer best has been, to spread the alkali thin with a feather or a bit of stick cut to a blunt point. Though the alkali should occasion no sensible change of colour yet the moment the acid comes upon it, every trace of a letter turns at once to a fine blue, which soon acquires its full intensity, and is beyond comparison stronger than the colour of the original trace. If, then, the corner of a bit of blotting paper be carefully and dexterously applied near the letters, so as to imbibe the superfluous liquor, the staining of the parchment may be in a great measure avoided: for it is this superfluous liquor which, absorbing part of the colouring matter from the letters, becomes a dye to whatever it touches. Care must be taken not to bring the blotting paper in contact with the letters, because the colouring matter is soft whilst wet, and may easily be rubbed off. The acid chiefly employed is the marine; but both the vitriolic and nitrous succeed very well. They should be so far diluted as not to be in danger of corroding the parchment, after which the degree of strength does not seem to be a matter of much nicety.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 27, 1826.

☞ A Regular Meeting of the Trustees of the Maryland Agricultural Society, at Mr. Cox's, on Thursday, 19th inst.—present,

R. Caton, *President, pro tem.*

Col. Bosley, J. B. Morris, Dr. Thomas, George Howard, J. Hollingsworth, George Cooke, James Gittings, D. Williamson, jr.—*Trustees.*

J. S. Skinner, *Cor. Sec'y*

On motion, *Resolved*, That it is expedient to present a memorial to Congress, praying that rock salt may be allowed to be imported duty free for the uses of agriculture.

Resolved, That Mr. Caton, Dr. Thomas, and Mr. Williamson be a committee to draw up the memorial, and submit it to the consideration of the Board at their next meeting.

Nothing further claiming the attention of the Board, it adjourned to meet at Mr. Morris' on Thursday, 16th February

James Howard, *Sec'y.*

☞There will be a *special meeting* of the Board of Trustees at the residence of Gen. Ridgely, the President of the Society, on Wednesday next, the 1st February, at 1 o'clock, P. M. to take into consideration a communication from the Board of Trustees on the Eastern Shore of Maryland.

DAVIS'S IMPROVED PLOUGH.

The subscriber thankful for the very liberal encouragement he has met with since he commenced the manufacturing of Gideon Davis' improved ploughs, would inform the public that he has an assortment of them on hand manufactured in the best manner, and of the best materials—Mr Davis has recently made a great improvement in casting the shares, so as to render them much harder and stronger.

The great advantage which these ploughs possess over all others in use, for easy draft and cheap repairs, will be readily acknowledged by those who have them in use.—The subscriber is also agent for Ryland Rodes of Va. for disposing of the privilege of manufacturing his improved Patent *Hill-side Plough.* This is considered a very valuable improvement for the purpose intended—They will be kept by the subscriber for sale—he has likewise Cornshellers on the most approved plan—his cylindrick Straw Cutters and Brown's Vertical Spinners, are as usual kept on hand, ready to order at his manufactory, No. 36 Pratt street.

JONATHAN S. EASTMAN.

N. B. Wanted immediately a quantity of good Plough Timber: those who are cutting that kind of timber had better call and get the dimensions. J. S. E.

CONTENTS OF THIS NUMBER.

On Root Crops, growing, securing, and applying them—On Cob Meal—Newly invented Angular Balance Plough—Extraordinary Cows—On Grasses, extract from the Hortus Gramineus Woburnensis with experiments on six oxen—Cotton Bagging, inquiry—The Unnatural Mother, a Sermon by William Cobbett—Meteorological Observations, in tabular form at Washington, Pa.—On Patents and Copyrights, the mode of application and forms to be used for properly securing them, by William Thornton, Superintendent of Patent Office—To make Common Ink—Newly invented Mathematical Scale, by Mark Twichell—On Dog-breaking—Extraordinary Mare—Child carried away by an Eagle—Recipes—Editorial

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	WHOLESALE. to	RETAIL. from	RETAIL. to
BEEF, Baltimore Prime,	bbl.	8 50			
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	33	34		
COFFEE, Java, ...	—	18	19		25
Havana, ...	—	15	17	18	20
COTTON, Louisiana, &c.	—	16	18		
Georgia Upland, . . .	—	14	14½		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½		14	16
Dipt, ...	—	10	11		12
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90	95		
FLOUR, Superfine, city,	bbl.	4 62	4 75	6 00	6 50
Extra . . . . do.	—				none
Fine, ...	—	4	4 25		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	55	66		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	60	87		
do. Red, ...	—	80	85		
do. White Flint, . .	—	2 00			
Rye, ...	—	55			
Barley, ...	—	95	1 00		
Clover Seed, Red . .	lb.	4 75		5 25	
Ruta Baga Seed, . . .	bush	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	35	36	42	
Beans, White, ...	—	1 50		1 62	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	30		
HOGS' LARD, ...	—	9	10	12	
LEATHER, Soal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45			
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb	7		8	
NAVAL STORES, Tar,	bbl.	2			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2 00	2 12		
OIL, Whale, common, .	gal.	30	31		
Linseed, ...	—	70			
PORK, Baltimore Mess,	bbl	13 00			
do Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	6 00	6 12		
RICE, fresh, ...	lb.	3	3½	6	
SOAP, Baltimore White,	lb.	12	14	18	
do. Brown, .	—	5½	7½	10	12
WHISKEY, 1st proof, .	gal.	24½	26	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37	50	
SUGARS, Havana White,	c.lb.	13 50			
do. Brown, . .	—	10	10 50		
Louisiana, ...	—	6 50	10 00		
Loaf, ...	lb.	19	22	20	25
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	75	80	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	16	17	25	
SALT, St. Ubes, ...	bush	46	48		
Liverpool Ground . .	—	50	52	62	
SHOT, Balt. all sizes, .	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 30		
Lisbon, ...	—	1 15	1 25	1 62	1 75
Claret, ...	doz.	4	8		
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled.	—	33	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by John D. Toy, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

SHEEP.

Dear Sir,

The enclosed papers, presented at the last meeting of the Pennsylvania Agricultural Society, may illustrate some points upon sheep husbandry, which have recently been discussed in your paper.

Respectfully, yours,
JOHN P. MILNOR,
J. S. Skinner, Esq. *Rec. Sec'ry.*

We have examined the Southdown sheep at Powelton. They are accurately formed, appear to have great vigour, small bone, wide loins, wide behind the shoulder, large hind quarters in proportion to their size, long frames, short joints, close fleeces, extending under, and covering the belly, so compact as to have the appearance of Merino fleeces; the wool appears equal to 7-8ths Merino.

Although we are farmers by vocation, we have never seen sheep resembling them in form or character, both of which we consider as peculiarly fitted for the general uses of this state. Some of us have travelled through Maryland and New Jersey, yet none of us have seen such sheep.

We have also examined the Durham Short Horn cattle. We have never seen animals better fitted for the yoke in gait; the bull, although appearing heavy from his round shape, moves with great vigour, and places his feet so accurately, that the tracks made with his fore feet, are occupied by his hind feet as he advances. The heifers also, move with alacrity and have very straight legs.

We are all dairy farmers, and have visited Powelton at our own suggestion. to satisfy our minds as to the dairy properties of the females. We do not hesitate to say that they have all the appearance of great milkers, having also yellow skins. We think the heifers excel in these points, all which we have seen.

LOYD JONES,
ISAAC W. ROBERTS,
PAUL JONES,
DAVID ROBERTS,
JOHN ROBERTS,
JOSEPH TRASEL,
GEORGE W. ROBERTS,
ISAAC HESTON.

Philadelphia county, Jan. 10, 1826.

I offered at two Exhibitions, Merino sheep, and took premiums for them. The wool was always sold and considered as equal to Merino wool. You purchased part of my flock, as they were supposed to unite good shape and grazing properties with fine fleeces. One of my rams produced in successive years fifteen pounds of wool in the yolk—one of the ewes produced nine pounds. As my farm adjoined my marsh meadow, the sheep had a range at most seasons of the year upon grass. The wool was therefore unusually free from all dirt except the yolk, of which it had a large quantity.

These sheep were valued by the butchers. They were large. Three two-years old grass fed wethers, to the best of my belief yielded 67½ pounds of rough or gut fat.

My flock were produced by a ram purchased from Mr. Wilson's stock, which I selected when a lamb, for his round and good shape; but I ascribe the weight of wool, size of carcass and proof, to my crossing with the Southdown blood of Mr. Waln's imported stock.

I have examined the Southdown sheep at Powelton. I think them extraordinary animals, having good forms, with the appearance of being thrifty. The fleeces are compact resembling Merino. I do not recollect to have seen such sheep in this, or in any other part of the country, taking into consideration their fleece and form.

Darby, Jan. 11, 1826. THOMAS SERRILL.

Dear Sir,—You have bred sheep for many years; have travelled into various states—have manifested great zeal for the improvement of live stock—have been rewarded by the highest prices, and highest premiums for sheep of the mixed Dishley, Teeswater and Southdown race, and have aided me in procuring the very best animals of that variety. I thus rely especially upon your judgment and ask your opinion. JOHN HARE POWEL.

Mr. Aaron Clement.

Have you ever seen such sheep, as my imported Southdown sheep?

Ans. I have seen sheep, whose faces and legs have some resemblance to yours, but entirely different in form, yours being decidedly superior.

Do you think sheep so peculiar in form and appearance, could exist in Pennsylvania or New Jersey, without your having seen them?

Ans. I have never known any of the pure Southdowns to be in existence, in either of the above named states, with the exception of those said to have been imported by Captain Beanes into New Jersey, and they have been crossed with other breeds until they bear but little resemblance to the original stock.

Have these Southdown sheep close fleeces, covering well their bellies with wool of fine quality?

Ans Your Southdowns are clothed with wool of fine quality, and close staple, their bellies well covered.

Have they good forms, with the appearance of vigor and hardiness?

Ans. Their form I think, superior to most sheep that I have seen. They appear to be vigorous and hardy.

Have they wide chests, wide loins, heavy hind quarters, long frames, exhibiting a good carcass for a grazier?

Ans. They possess the above named fine points in a very eminent degree.

Very respectfully, yours,
AARON CLEMENT.

Sir,—I have observed in Merino sheep, that those which have the most yolk, have the best and finest fleeces.

I have examined your Southdown sheep, and do not hesitate to say that I have never seen such sheep; and they appear to me to be better adapted to this country, than any other sheep I have seen. The wool is sufficiently fine.

I have been a farmer in Delaware county, Pennsylvania, for upwards of thirty years.

Very respectfully, yours,
JOHN THOMSON.
John Hare Powel, Esq. *Jan.* 7, 1826.

I have been a farmer more than twenty years. I have kept a drovers' inn, for sixteen years, on the great western entrance to Philadelphia, and near the town. Large droves of sheep are brought to my premises. I have known a thousand sold in one day. I think twenty thousand sheep, or thereabouts, are annually sold at my establishment. I am a dealer in live stock, and have devoted much time to examining different animals.

I have handled the Southdown sheep, last brought to Powelton from England, and am of opinion that they are beyond all question, the finest sheep I ever saw; and I think there is as much difference between them and the common sheep of the country, as between a full blooded turf horse and a Canada cart horse. CHRISTIAN YOUNG.

Blockley, Jan. 16, 1826.

John Hare Powel, Esq.

In answer to your inquiries, I have sold Southdown wool in England, and I do prefer the pick lock Southdown wool, to the pick lock of full blooded Merino of this country. I have had considerable experience in both countries, as I have followed the business of a wool stapler in this country six years last past, as also a number of years in England.

I am, very respectfully,
BENJAMIN BULLOCK.

P. S. The finest fleeces have always the most yolk if produced on the same land. I refer to Merinoes.

The above ideas in regard to wool from sheep, stated, agree with my opinion.

ANTH'Y DAVIS.

Mr Milnor,

The samples of wool shown to me this afternoon by John Hare Powel, Esq., being from a Southdown ram, I think is equal to wool from 7-8ths blooded ram (Merino,) of this country.

BENJAMIN BULLOCK.
Philadelphia, 1 *mo.,* 3*d,* 1826.

I have likewise samples of wool as above, and am of the same opinion. ANTH'Y DAVIS.

PENNSYLVANIA AGRICULTURAL SOCIETY.

The Society met at their Hall, on Saturday, January 14, 1826, the following members being present:

Manuel Eyre, George Blight, Loyd Jones, Thomas Smith, of Delaware, Samuel Davis, James Worth, Dr. Hare, Wm. H. Keating, Aaron Clement, Jonathan Thomas, Caleb Churchman, Peter Graham, Thomas Mitchell, Thomas Landreth, Geo. Washington Sargeant, John Hare Powel, Reuben Haines and John P. Milnor.

The following members were unanimously elected officers for the present year:

President—Jonathan Roberts.
Vice-Presidents—William Harris, James Worth, Stephen Duncan, Thos Serrill, George Sheaff.
Corresponding Secretary—John Hare Powel.
Treasurer—George Blight.
Directors—Manuel Eyre, Jonathan Thomas, Reuben Haines, William J. Miller, William Phillips, Caleb Churchman, Thomas Smith, Samuel West, John Willcox, Samel Davis, Henry L. Waddell, James Cox, Anthony Taylor, Mathew Roberts, Richard B. Jones, G. W. Holstein, John G. Watmough, William Darlington, Charles Miner, William Evans.
Recording Secretary—John P. Milnor.
Assistant Recording Secretaries—Charles J. Davis, Adam Siter.

The following gentlemen were duly elected members:

Isaac W. Roberts, Paul Jones, John Roberts, Geo. W. Roberts, John Moss, Wm. Cook, Charles Kuhn.

Communications were presented by the Corresponding Secretary—

From the Board of Health, on the removal from the precincts of the city, of offensive substances, and their conversion into "inodorous manures;" exhibiting various processes pursued in Europe, for the attainment of such objects.

From James William, Esq. of Hilton, Philadelphia county, on the cultivation of root crops; on his successful experiments in feeding neat cattle; on the nutritive matter contained in white turnips, and their effects on swine; on his mode of cultivating, gathering, securing and applying them, accompanied by details supporting his opinions.

From Alexander Reed, Esq. an extensive and practical farmer of Washington county, Pennsylvania, conveying his opinions on certain improved neat cattle, giving facts in proof of their superiority over the best native breeds.

It having been stated that certain speculative writers had condemned the introduction of British sheep, and improved races of cattle, the following papers from practical men were offered, opposing facts to ingenious disquisition.

(*Merinos improved in form.*)

A note from one of the Vice Presidents, an extensive grazier of Delaware county, on Merino and Southdown sheep, conveying his opinions upon the improvement of Merino sheep, for the purposes of the grazier, as well as manufacturer, and observing that he had selected a Merino ram with reference to both FORM and fleece—had made crosses with a breed of Southdowns—had obtained in consequence larger and BETTER carcasses, *wool which sold at the price of Merino*, animals which at two Exhibitions received the premiums for Merino sheep; one of them, a ram, having in successive years, afforded fifteen pounds of wool in the yolk; another, an ewe, nine pounds in the same state, although the wool was unusually free from extraneous matter, excepting the *abundant supply of yolk:* and in confirmation of the opinion upon the advantages of the cross, stating "three two years old grass fed wethers to the best of my belief, yielded 67½ pounds of rough or gut fat." And further—"I have examined the Southdown sheep at Powelton. I think them extraordinary animals, having good forms, with the appearance of being thrifty. The fleeces are compact, resembling Merino. I do not recollect to have seen such sheep in this, or any other part of the country, taking into consideration, their fleece and form."

(*Fine fleeces and forms of Southdowns.*)

A letter from the Corresponding Secretary to Mr. Clement, asking his opinion, as a successful breeder of sheep, upon the forms, points, fleeces, general appearance, and fitness for grazing purposes of some Southdown sheep imported in November last, by Mr. Powel—to which Mr. Clement replied:

"Your Southdowns are clothed with wool of *fine quality* and close staple, their *bellies well covered*, their form I think superior to most sheep I have seen; they appear to be vigorous and hardy." To the question—"have they wide chests, wide loins, heavy hind quarters, long frames, exhibiting a good carcass for a grazier,' Mr Clement replied—"they possess the above named fine points in a very eminent degree."

(*Southdowns adapted to the uses of this State.*)

A letter from an extensive and experienced farmer of Delaware county, in reply to the Corresponding Secretary's inquiries in regard to sheep, stating that he has found the *most yolk*, in *the best and finest Merino fleeces*, that he had examined the recently imported Southdowns at Powelton, that he had never seen such sheep, and that they appeared to be better adapted to the purposes of this country than any he had seen.

(*Southdown sheep with fine forms and fleeces covering the belly.*)

In confirmation of the foregoing opinions upon Southdown sheep, a certificate was produced from eight gentlemen from an adjoining county, farmers by vocation, who, as members of a neighbouring agricultural society, had visited Powelton at their own suggestion, saying—"We have examined the Southdown sheep, they are accurately formed' * * * * "They have close fleeces extending under, and covering the belly, so compact as to have the appearance of Merino fleeces; the wool equal to 7-8ths Merino."

(*Southdown wool.*)

Also a certificate from two of the most respectable and intelligent wool staplers of this state, declaring, that the samples of wool shewn by the Recording Secretary, taken from a Southdown ram imported by Mr. Powel, since the last Exhibition, were equal to wool from 7-8ths blooded Merino.

A note from Mr. Bullock, who had been for "a number of years a wool stapler in England," and who has been for some years, extensively engaged in the purchase of wool in this country, saying—"I have sold Southdown wool in England, and I do prefer the pick lock Southdown wool, to the pick lock of full blooded Merino of this country. The finest fleeces of Merino, have always the most yolk."

Mr. Anthony Davis, who had been a grazier in England, and is now Mr. Bullock's partner, confirmed Mr. Bullock's opinion.

(From the Minutes,)
JOHN P. MILNOR, *Rec. Sec'y.*

NIGHT SOIL—ITS PREPARATION, USE AND VALUE IN AGRICULTURE.

(Communication to the Pennsylvania Agricult. Society.)

DEAR SIR, *Philadelphia, Jan. 18th, 1826.*

Enclosed I hand you a communication from the Board of Health, on the subject of the conversion of privy filth into *poudrette* and *urate*. I would thank you to lay it before the Pennsylvania Society for the promotion of Agriculture.

Very respectfully, your obed't serv't,
SAM'L. J. ROBBINS.
Presd't of the Board of Health.

JOHN HARE POWEL, ESQ., Corres. Secr'y.

To the Pennsylvania Agricultural Society:

The attention of the Philadelphia Board of Health has been earnestly directed towards discovering some mode of disposing of the contents of privies, which would remove from the precincts of our city, where the deposits are made, a nuisance at present of a very formidable character, and which must necessarily increase. In pursuance of this object, the Board has concluded, that an effectual remedy for the evil is only to be sought in the conversion of the offensive substances into *inodorous manures*, after the methods now successfully practised in many parts of Europe, and especially in the cities of Paris and London.

The principle by which this object is effected, is simple, and consists in the drying, or dessication of the urinary and fœcal matters, either apart or together, by the addition of certain absorbent substances, such as plaister, lime, chalk, ashes, &c. It is probable that the ashes of the Lehigh and Schuylkill coal, may be thus usefully disposed of. The manure prepared from the fœcal or more solid contents of privies, has long been known and highly esteemed by the gardeners and agriculturalists of France, under the name of *poudrette:* That prepared from the urinous portion is comparatively of modern invention, and is called *urate*.

Aware that such a plan is not to be carried into effect under the special direction of either your society or their own body, the Board lays the subject before you, in the hope that its advantages will be properly investigated and made known, so as to lead to useful results; for, surely, nothing can be more worthy of general and special encouragement than a plan not only calculated to promote the health and comfort of our large community, but to render essential assistance to the most important of the useful arts, insuring at the same time liberal profits to those actually engaged in its execution.

That your society may be placed in possession of more particular information relative to the subject under consideration, the Board would refer you to numerous highly favourable reports and interesting proceedings of the most respectable associations established in Europe for the encouragement of agriculture and the useful arts, among which we would especially call your attention to those of the French "Royal and Central Agricultural Society," and the "Society for the Encouragement of National Industry," during the years 1818-19-20.

The following translation of a French document, furnishes an accurate detail of the process by which the *urate* is manufactured, and throws much important light upon the subject generally:

"Certificate granted upon application for a brevet [patent] of Invention, to M. Donat, (Joseph-Etienne-Victor-Gabriel,) residing at Paris, department of the Seine.

The Ministerial Secretary of State, for the department of the interior, considering the Memoir of M. Donat, proprietory, residing in Paris, Rue des Bons-Enfans, No 28, in which he states his desire to enjoy the proper rights secured by the law of the 7th of January, 1791, to the authors of inventions and discoveries in all kinds of industry, and to obtain in consequence, a brevet of invention for fifteen years, for the sudden drying of the urinary portion, and manipulation of the contents of privies, within the twenty four hours succeeding their removal; all by particular means and processes, of which he declares himself the author, as it appears from the verbal process addressed at the time, to the depot of documents attached to the secretaryship of the department of the Seine, the 19th of January, 1819.

Considering the designs of the apparatus, and the descriptive memoir of which the following is a copy:

"I have contrived a plan which affords me the means of extracting from urinary and fœcal matters, a manure very superior to those hitherto known. Desirous of securing to myself the exclusive enjoyment of my invention; I have made application to the prefecture of the department of the Seine, conformably to the laws of the 7th of January and 25th of May, 1791, for a brevet for 15 years for the complete and immediate dessication of fœcal and urinary matters together or separately by means of absorbents which I add, such as lime, plaister, chalk, marl, ashes either natural or mineral, such as are taken from the different ash mines. Substances having calcareous bases may be calcined for the absorption of a greater quantity of the liquid, at least when the high price of the combustible, or the low price of the absorbent do not offer greater advantages in using it directly from the quarry.

This variety of absorbent substances, assures to every country the means of manufacturing a very abundant and active manure with human dejections. The product of my operations is inodorous for two reasons: The first is, that when urine is employed, it gives out no odour after the absorption of its moisture: The second is, when the fœcal matters are sufficiently mixed with the absorbent; I bury them at least 15 inches deep, to prevent the disengagement of the odour during the fermentation necessary to the good quality of the manure.

I give to the manure made with pure urine, and one of the aforesaid substances, the name of *urate*. I believe that this composition mixed or combined with that resulting from the combination of fœcal matters with a certain quantity of one of the aforesaid absorbent matters, produces a manure of great activity. The only difficult point is, to ascertain the proper proportions for the admixture.

For the manufacture of the urate on a large scale, it is necessary to construct at least six basins, in form of a watch glass, inverted. They should hold about 12 hectolitres, (about 300 gallons,) of which there will be six of urine and six of the absorbent matter of one of the kinds formerly designated, freshly calcined.

The cask or vessel holding the urine, is to be so placed that it will empty itself through its bung into the basin. During this operation, one workman is employed in pouring in the plaister, another in mixing it in the basin with a rake or scraper.

When the mixture is finished, the operators pass to another, and so on to the sixth. Then the first is emptied for the purpose of commencing operations anew. The mixture is finished by further drying in the air.

At the end of the day, the quantity of urate which has been made since morning, is to be broken down by means of a cast-iron cylinder rolled over it; after which it is sifted (*passée ā la double claie*) and then immediately stored or packed up to prevent the absorption of moisture.

By this combination, the urine being dried by its union with the absorbent matters, which is itself a manure, unites all the vegetative powers of its two component parts, and will constitute the most productive of all our manures, in consequence of the very small quantity that is necessary to employ to procure the best results.

I have designated six substances as being proper to absorb the superabundant water of urine, and I have only mentioned them without pointing out any particular one, as I thought that no country is without some one of them. But in case I am mistaken in this opinion, very great advantages may still be derived from urines, by mixing them with burnt earth, (that of heath soil is to be preferred,) or with natural ashes, (*cendres naturelles.*) I only estimate the value of this mixture as a means of obtaining all the salts of urine in a solid state, which will facilitate its transportation and employment in agriculture.

The ancients considered urine as the most powerful of manures. This is not therefore the end of my invention, which consists alone in its sudden dessication and solidification, and the draining or drying up of those infectious depositories ot this substance to be met with in the environs of large cities, where they furnish inexhaustable sources of unhealthy exhalations

I leave it to the learned societies to express their judgment upon the qualities of the urate, and restrict myself to the application for a brevet of invention, for a method of preparing it immediately, so as to destroy at the same time the odour of the urine

(Signed) DONAT.

Paris, January 19th, 1819.

[Here follows the certificate granting the brevet or patent to M. Donat, for 15 years; signed by the Ministerial Secretary of the interior department.

COUNT DECAZES.]

Signed for and on behalf of the Board of Health.

SAMUEL J. ROBBINS,
Attest, President.
Thos. H. Ritchie, Sec.
Philadelphia.

PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE.

Annual Meeting, January 17, 1826.

The President, Richard Peters, in the Chair,

The election of the Officers of the Society took place as follows:—

President.—Richard Peters.

Vice Presidents.—William Tilghman, Jas. Mease, Nicholas Biddle, Isaac C Jones

Treasurer.—William M. Walmsley.

Secretary.—W. S. Warder.

Curators.—Reuben Haines, Roberts Vaux, Stephen Duncan, Jeremiah Warder. John H. Powel.

Librarian—William S. Warder.

Corresponding Committee.—Richard Peters, William Tilghman, Zaccheus Collins, James Mease, John Vaughan.

The following communications were read—

1. By a Member—Observations on the importance of yolk for the nourishment of wool; on the advantages of attending to the form of Merino sheep, and on the success of British farmers in obtaining a race fitted to supply fine wool, and fine mutton.

2. Mr. Philips gave an account of the successful experiment of a gentleman in Philadelphia county, in sowing rapeseed. The crop was great, and afforded very nourishing food for sheep, for which animals, the plant is regularly sown in Europe.—The roots survive the winter, and vegetation in the following spring furnishes excellent pasture. Some of the oil was pressed from the seeds, at a flaxseed mill, and gave at the rate of one gallon to the bushel. It was shown to a regular English wool-stapler settled in Philadelphia, who offered to contract for several thousand gallons annually at one dollar per gallon, for the purpose of oiling wool prepared for making cloth. He remarked that one cause of the inferiority of American cloth, was the want of rape oil to grease the wool. It is preferred to olive oil. Mr. John Parkin, of Newport, Delaware, cultivates rape, and an account of the mode to be pursued, with respect to it, is given by Mr. William Parkin in the American Farmer, vol. 5, p. 295—Rape offers a new object of profitable attention to the American farmer:—furnishing superior food for sheep, in the spring and summer; and excellent food in the winter:—useful and abundant oil from the seeds:—rich food for cattle in the cake after the expressing of the oil, and being an excellent preparative crop for wheat. The powdered cake is extensively used in England as a manure for drilled turnips, and the sum stated by Mr. Bloomfield, of Norfolk, when on a visit to the United States a few years since, to be annually laid out by him for that object, would, if mentioned, excite wonder in some, and disbelief in others who 'pride themselves on never having been out of their native state,' and who, probably, despising all knowledge of agriculture contained in books cannot have an idea of the extent of a British farm, the capital invested in it, or of its garden-like culture. From the rape seed oil, too, and potash, the Savon Vert or green soap is made, which for scouring wool, is preferred in the manfactories of France to all other soaps.

3. Dr. Mease gave an account of a new and extensive source of consumption of merino wool, in its use for the bodies of hats, the manufacture of which is extensively carried on at Hamilton Village, on the west side of the Schuylkill, by machinery moved by a steam engine of five horse power. The inventor is Mr. Isaac Sandford. The wool employed is of its natural length, and the hats, when plated with fine fur, are as light and neat, but more durable than rorams. The prices also, of the bodies, and of the hats when finished, are much reduced. A quality of wool is stated by Mr. Sandford as much wanted for hats, viz: that of lambs shorn about the end of August. This practice is partially followed in the United States, and two of the few practical farmers who favour the publick with the result of their experience, have spoken decisively in favour of the practice, as regards the thickening of the succeeding fleece, in preventing the loss of wool in the following year, and in promoting the growth of the animal. One of these farmers writes, after seventeen years experience. Both refer to the common sheep of the country; with respect to Merinoes, it is known that the fleece of the lambs of one of the breeds abounds with hairs, which unfits it for making cloth, but does not prevent its use in forming the body of hats. The second fleece from these lambs, if they have been shorn in the August of their first year, will be free from hairs, and sell for more than if the first fleece had been permitted to grow. The wool of the first shearing will consequently be a clear gain, and at the same time the manufacturer would be supplied with the article in an improved state.

The following premiums were proposed:

1. Fifty dollars, or a gold medal of equal value, for the greatest quantity of sewing silk made from cocoons of silkworms which have been bred in Pennsylvania, and fed on the Italian mulberry tree.

2. Twenty five dollars for the best treatise on the culture of the Italian mulberry tree, and on the breeding and management of silkworms, the result of practice in the United States.

3. A silver cup, value fifty dollars, for the best specimen of wool adapted to the manufacture of superfine broad cloth, reference being had to the form, properties, and characteristics of the sheep, fitting it for the production of high flavoured mutton, with light offal.

4. A silver cup, value fifty dollars, for the best specimen of long or combing wool, reference being had to the form, properties, and characteristics of the animal, affording most flesh and tallow with least offal.

5 A silver cup, value twenty-five dollars, for the best potatoes produced from the seeds of the apples, reference to be had to the product and quality of root.

The publishing committee reported that the fifth volume of the Society's Memoirs would probably be presented at the next meeting.

STEAM MILLS.

[Information wanted, on the practicability of having recourse, profitably, to steam mills of small power where continued droughts have exhausted water power in the country.]

Oak Hill, Fauquier co (Va.) Jan. 23, 1826.

Dear Sir—I am desirous of procuring information on a subject of considerable importance to me; and as my retired situation precludes me from opportunities of personal inquiry and observation, your goodness will excuse the liberty which I take in availing myself of your superior advantages. Should you think it advisable to make your valuable journal the medium of communication on this subject, I must request that my signature may not appear.

This has been the worst season for millers in this part of the country, known within the memory of man. Of this respectable fraternity I have the honour to be a member. My little mill has two pair of stones—one 4½ feet diameter for merchant work, capable, with a sufficient supply of water, of manufacturing twenty-five barrels of flour per diem; but alas! the stream is so light, even in the most favourable seasons, that I could not make more than half that quantity. It has occurred to me that steam power might be applied to it advantageously. My impression is that an engine of 8 horse power would be required for the purpose. Allow me, therefore, to propose the following interrogations:

1. What would be the cost of a steam engine, with all the fixtures and appurtenances, of power sufficient to give the requisite motion to a pair of 4½ feet burrs?

2. What quantity of (wood) fuel would it consume in 24 hours?

3. What number of hands would be necessary to attend it?

4. How long would the presence of an engineer be indispensable?

5 What would be the annual cost of repairs on a fair average?

6. Would the grinding be sufficiently regular?

7. Could the power of steam be applied in such a manner to an ordinary overshot mill as to retain the water-wheel, &c. and allow resort to the water power on suitable occasions?

8. If not, in what manner is the power applied?

COTTON PLANTER.

Dear Sir, *Maury Co. Tenn. Dec.* 23, 1825.

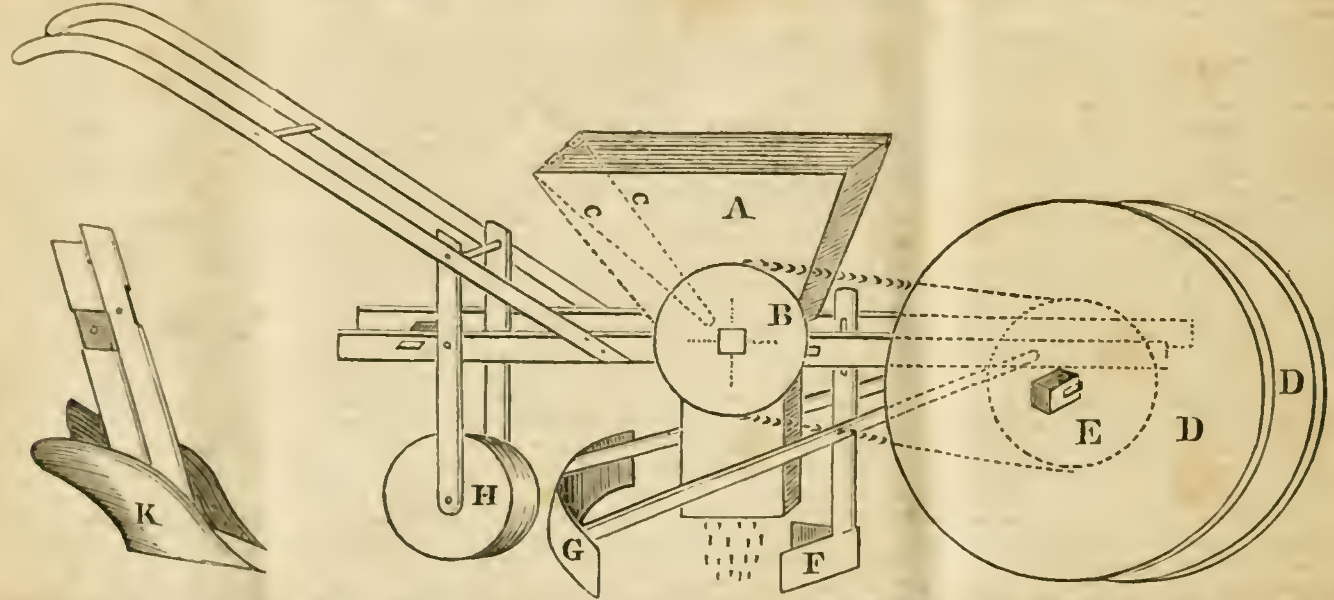
Having lately seen in the Farmer, a description of a Cotton Planter, invented by Mr. Smith, accompanied by inquiries whether any such machine had been used; I am induced to state that Mr C. Ford, of Virginia, has obtained a patent for such a one, after having tested its performance in planting his own crop last spring. Having seen the description of both, I think them essentially, if not identically, alike in their construction. Your Edisto Island correspondent, or any other anxious to try the machine could be supplied by Mr. F. Follett, hardware merchant, Petersburg, Virginia, who will keep a supply of the article, and is interested in the benefits of the patent.

The weather continued unusually dry and warm through all the seasons of this year up to the 1st of this month—since then it has been cold; but little rain and only one small snow has fallen. The summer and fall drought was excessive, which materially injured our crops of corn and cotton, notwithstanding which, more of the latter article will be carried to market from the state, than in any previous year, in consequence of the increase of its cultivation. But little wheat is raised with us, and that the last season was destroyed by rust and weevil. This insect not only extended its ravages to the Indian corn in our cribs, but also to the grain standing in the field. Except weevil and the insect which occasions the rust on the cotton leaf, no others appeared during the year in unusual quantities.

Yours, &c.

A Duck River Planter.

SMITH'S PATENT COTTON PLANTER AND CULTIVATOR



A. The hopper—B. a sheave attached to the wired axle for separating the seed. C. C. a dotted line, represents a moving board within the hopper, to keep the seed from clogging. D. D. the wheels which give motion to the machine. E. another sheave between D. D. over which the band passes to give motion to B. F. the coulter. G. the coverer. H. the roller. K. two small ploughs for cultivating the cotton, to be applied after A. F. G. & H. are removed.

The subscriber respectfully informs those interested in the cultivation of cotton, that the above machine having been highly approved by all who have seen it in operation, he has taken out a patent for the invention, and is now ready to receive orders for them. To put the machine in operation, the land must be first listed with three furrows together—one machine keeps pace with three ploughs.

The price of each machine is $15. For further particulars, refer to a former letter in the 7th vol. American Farmer. Address to me at Eastville, Northampton county, Virginia.

FRANCIS H. SMITH.

[From the New England Farmer.]

COB MILLS.

Roxbury, Jan. 25, 1826.

Mr. Fessenden—I noticed in your paper of the 20th, an inquiry from a correspondent, C. whether Corn Mills for breaking and grinding cob and corn together are in use in the neighbourhood of Boston I would inform your correspondent that mills for that purpose have been made and sold at the Agricultural Warehouse, No. 103, State street, but were found on trial of working with hand labour, much too hard, and not to do the work sufficient for the purpose. A mill on the same principle, and calculated for horse power would answer the purpose well, and may be had at the above establishment.

Yours, &c. ***

Framingham, (Ms) Jan. 26, 1825.

Mr. Fessenden—If I can contribute any thing for the information of your correspondent C., I will do it with pleasure.

I formerly had a cast iron corn and cob cracker in my grist mill, and practised grinding corn, rye and cracked cobs, as occasion required, but I found that after grinding cracked cobs and corn, the stones would not make good meal for bread until they were new dressed.

In 1824, the old mill privileges being taken up for factories, I undertook with another man to build a mill on a good stream, near the centre of this town, we put in it a pair of stones for rye, and a pair for corn, in the usual manner: for the cob meal we took a pair of large stones, cut the eye of the runner 12 inches at top, and 14 or 15 inches at bottom, and bosomed it out large, as we term it; in this manner it answers every purpose for cracking and grinding corn in the ear.

Yours, respectfully,

L. BUCKMINSTER, Jr.

HORTICULTURE.

From the Westminster Review—London.

HISTORY OF ANCIENT AND MODERN WINES.

By Alexander Henderson, M. D.

Dr. Henderson has done well what the title page of his book promises, and he has done more than it promises. A history of the wines of the ancients would be very incomplete, if it did not make us acquainted with their mode of managing their vineyards, the processes of their vintage, and the preparation and preservation of their wines, as well as with the varieties of the wines themselves, and the resemblance of their qualities, as far as such resemblance can be ascertained, to well known wines among the moderns, and such a history would be comparatively dry and uninviting, if it did not introduce us to the banquets of the ancients, of which their wines formed so essential and celebrated a portion. These topics the title-page led us to expect, and Dr. Henderson's researches have not been spared, to render them interesting and amusing as well as instructive. With considerable learning, and great judgment and taste, he has succeeded in making the dry details of the geoponical writers, the short and occasional information or allusions of the didactic, historical, or miscellaneous writers of Greece and Rome, and the fervid and joyous praises of Bacchus, with which the poems of Horace especially abound, shed mutual interest and light on one another.

A history of the wines of the moderns required and admitted a different mode of management; and accordingly our author has, in this portion of his work, given us the result of much personal observation and inquiry, and of much reading, respecting the vineyards, vintage, and principal wines of France, Spain, Portugal, Germany, Hungary, Madeira, the Cape of Good Hope, &c. And in his chapter on England he has pointed out the various changes in our wines, produced by changes in political relations, fashion, and other causes. This portion will justly be deemed by the *bon vivant* much more interesting and instructive than the part relating to ancient wines, but we miss those classical allusions, and that familiarity with the ancients in their domestic circle, which throws a powerful charm over the first part of the work.

So far we have given this very general idea of Dr. Henderson's volume, it merely answers to its title-page; but there are, besides, chapters on the principles of fermentation, and the constituents of wine in general; on the classification of wines; on certain modes of keeping and mellowing wines; on the mixture and adulteration of wines; and on the dietetic and medical qualities of wines. There are, besides, several useful articles in the appendix, particularly a note and table on the quantity of spirit contained in different wines; a note on the escape of alcohol and aroma during fermentation, and a valuation of the wines of France, according to their several qualities. By far the largest, and the most generally interesting portion of the work, relates to the immediate subject of the title-page, and of this portion we shall lay before our readers a rapid analysis, interspersing it with notices of such errors or omissions as have occurred to us.

We could have wished that our author had directed his reading and thoughts to one topic which appears to us curious; we mean the extreme eastern limit beyond which at no time, ancient or modern, the cultivation of the vine and the manufacture and use of wines appear to have passed! At the commencement of his chapter on the wines of (Modern) Persia, he says, "Persia is supposed to be the native country of the vine." This opinion we believe to be correct: the apochryphal, but by no means improbable, tradition of the discovery of wine in Persia we shall afterwards notice. In the mean time we may refer our readers to a treatise of Dr. Sickler, which Mr. Loudon, an excellent judge on this subject, assures us, gives a learned and curious account of the migration of the vine from Persia to Egypt, Greece and Italy.

To the east of Persia, or, at the furthest, to the east of the Indus, we know of no authority for the culture of the vine and the use of its beverage. Bacchus, indeed, is said to have brought the vine from India, but, so vague and fluctuating were the ideas attached by the ancients to the term India, that we think we have extended its limits, as known to them, sufficiently far to the east, when we have extended them to the Indus. The army of Alexander mutinied on the banks of the Hydaspes, a branch of that river, and we shall immediately perceive that he had advanced to the eastward of the cultivation of the vine and the use of its beverage.

The earliest notices we possess of India, which are at once authentic and minute, are derived from the materials collected during the expedition of Alexander. Our present object being exclusively confined to the customary beverage of the Indians at that period, we shall refer only to the Journal of his Admiral Nearchus, as preserved in the writings of Arrian, Strabo, Diodorus and Pliny, and translated and illustrated with much learning and research by Dr. Vincent. From it we learn, that the Indians planted rice in water, and made wine from rice, that is, arrack. This we regard as a decisive proof that distillation was known in Hindostan before it was practised by the Arabians, to whom Dr. Henderson is disposed to ascribe its discovery, [p. 24.]* Whether the invention is due to Hindostan or to China, where arrack was known according to Du Halde, in the reign of Yu, is doubtful, but we are certainly justified in tracing it into Arabia, from countries further to the east.

The other substitute for grape wine, which, in ancient times, as at present, was common to the east of the Indus, is palm wine. This, under the name of Arabian wine, formed a large and important article of export from the Red sea to India, as appears from the Periplus of the Erythrean sea, ascribed to Arrian, and illustrated by Dr. Vincent. That it was made in India as well as exported thither, we have the express authority of Pliny, and Philostratus, in that strange gallimatia of romance, miracles, and truth, his life of Apollonius of Tyanæa: the latter represents it as equally intoxicating with wine from grapes.*

Wines, therefore, from rice and the palm, were the favourite drinks in Hindostan and China at the remotest period of our knowledge of these countries; and nearly all the intervening notices between that period and the present time, are equally silent respecting the use of grape wine. Regarding China, the earliest information we possess is derived from the Mahomedan travellers, who visited it in the ninth century, their words are express, "Their drink is a kind of wine made of rice; they have no other wine in the country, nor is there any brought to them." [p. 13.] "They drink no wine, nor admit vinegar, because it is made of wine." [p. 33.] "The Indians have no grapes, and the Chinese not many." [p. 36.]† The only notice of the culture of the vine in China, with which we are acquainted, is to be found in Marco Polo, who says, in Cathay or northern China are numerous vineyards yielding wine.‡ In Bengal, however, he expressly states, that the inhabitants live on flesh, rice, and milk, having no wine, but making an excellent wine from rice and spices.

Beyond the Indus, therefore, the cultivation of the grape and the use of wine seem scarcely to have passed, though the climate and the soil of many parts of this division of Asia, must have been equally favourable. It is in vain to conjecture the cause of this limit to the eastward, and equally vain to point out the cause which has given to the vine, as well as to most of the knowledge and improvement of mankind, a progress from Asia Minor or its vicinity, a gradual but almost unchecked progress towards the west. The great waves of population, as they have not unaptly been called, the Celtic, Gothic, and Sclavonian, have been impelled in this direction; and undoubtedly the most highly civilized portion of the globe, Western Europe, and Eastern America, have derived from Asia Minor, or its vicinity, two of the most useful instruments of knowledge, the numeral and literal arithmetic, and at least two of the most useful and sublime branches of science, geometry and astronomy. With scarcely a single exception, nothing seems to have moved eastward beyond the Ganges, neither man, nor that which most exhilarates his animal, or those things which most exalt his intellectual and moral existence.

But though native wine was scarcely known, and foreign wine little used to the east of Persia in ancient times, there were one or two preparations of he grape, or its juice, which were in much request. In the Periplus of the Erythrean sea, *dipse* or rob of grapes, manufactured at Thebes in Egypt, seems to have been a common article of export from the Red sea to the east: and we can trace this through the intervening ages to the present time, as a favourite relish there. Besides the authorities on this point referred to by Dr. Vincent,§ we would point out a curious passage in Busbequius, in which the mode of manufacturing rob in Turkey, in the 16th century, is particularly and clearly described. This author also describes another preparation of the juice of the grape, to which he says the name of Arab sorbet or Arabian drink, is given, equally intoxicating as wine.*

In Persia, therefore, we must look for the origin of the vine. We know not that it is indigenous elsewhere, except in America: in the northern parts of that continent a small grape was found by the Icelanders when they first discovered it; and hence they gave it the name of Vinland; and very lately luxuriant and prolific vines have been discovered near the borders of California. The discovery of wine in Persia, to which we have already alluded, as given on the authority of a Persian MS. by sir John Malcolm [*History of Persia*, i. 16,] may be thus briefly told;—The Persian emperor who founded Persepolis, being extremely fond of grapes, put some into jars to preserve them; tasting them while they were fermenting he found them so bad, that he put them back and marked *poison* on the jars. His favourite mistress, from some cause, weary of life, drank the liquor, which, the fermentation being at an end, was so pleasant as to reconcile her to life, instead of poisoning her. The king discovered what had taken place, and thus wine was discovered.† Little is known of the qualities of the wines of ancient Persia Proper; but, from the interesting picture Nearchus has drawn of the province of Persis: and of its superior culture of the vine, it seems probable that the wine of Shiraz, which is in that province, was similar in repute and quality to what it is at present.‡ The ancient wines of the dominions belonging to the kings of Persia in Asia Minor, will be noticed when we come to Dr. Henderson's chapter on Greek wines; and the modern wines of Persia, when we notice his chapter on that subject.

From Persia the grape and wine passed into Asia Minor and Egypt: but at what period it is impossible to fix; their passage into the former district was natural and easy; their passage into Egypt probably took place in consequence of the conquests of Sesostris. But, at whatever period, or from whatever cause introduced into Egypt, the culture of the grape and the use of wine seem soon to have disappeared there, and to have given place to the use of beer. Herodotus informs us that beer was used because the soil of Egypt was not calculated for the grape; certainly the low, alluvial, and rich soils of this country, and the annual overflowings and deposits of the Nile are not extremely favourable to the vine: but, as it was introduced there from Persia, and again cultivated in the time of the Cæsars, the cause of its disappearance must be sought from another source. This source was superstition, the same which debarred the Egyptians, for a long period, from applying to maritime affairs. Plutarch informs us, that before the reign of Psammeticus, the Egyptians neither tasted wine themselves, nor offered it to their gods, under the idea that it was the blood of the giants who had warred against them.[*] And Heliodorus, in his Ethiopica, represents Calasiris as abstaining from wine, because he was an Egyptian of Memphis and a priest of Isis, so that even at this period, after wine had been encouraged, with other luxuries, by Cleopatra and the Romans, superstition still restrained the priests of Isis from its use.[†]

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* Dr. Vincent on the Navigation of the Ancients, i., 18. Rice, Οϱυζα: Urithi, in Sanskreit, i. 14.

* Philostrat. de Vita Apollon. Tyan. Lib. 11, c. 3. The Orientals knew that the palm was male and female; and they believed that every thing created was so; this knowledge and belief produced a singular effect in the grammatical construction of their language. See Michaelis sur l'influence des Opinions sur le Langage, &c. pp. 19, 20.

† Ancient Accounts for India and China, by two Mahomedan travellers in the 9th century.

‡ Marco Polo; in Kerr's Collection of Travels, i. 339, 351. Sago is mentioned by Oderic, who travelled in 1318, p. 409.

§ Navigation of the Ancients, xi. 751.

* Busbequius p. 91, 92. In the preparation of rob grapes, mustard was used to give it pungency; to this the Italians gave the name of musto ardo, hence our word *mustard;* a singular instance, we believe, of a substance, by no means an original or essential ingredient in a compound, receiving its name from that compound. That mustard is not an indigenous plant, seems to be indicated by this derivation of its name; and from the circumstance that in the Gothic version of the Gospels, as well as in the Anglo-Saxon, and all the Gothic dialect, the word for mustard is evidently derived from Sinapi. Dipse is in very general use in Syria; *Buckingham's Travels among the Arab Tribes*, p 52.

† A somewhat different version of this story is given in the Ancient Universal History, vol. v p. 335. It is, perhaps, worth noticing, that Noah, to whom the Bible ascribes the discovery of wine, was in the vicinity of Ararat, when that took place; and this mountain is either in Persia or near it.

‡ Vincent i. 412.

Beer, then, was the general beverage of the Egyptians in the age of Herodotus,[‡] and probably till the conquest of their country by the Romans. That it, as well as palm wine, was drunk in the countries between the Caspian and the Mediterranean in common with wine, we have the authority of Xenophon. Between the Euphrates and the Araxes he came to some villages where he found beer in jars, in which the malt was still floating on the brim, with reeds of different sizes and without joints; with these the liquor was sucked out; it was very strong, and pleasant to those accustomed to it.[§] Before Xenophon had commenced his regular retreat, he arrived at a delicious plain where he found palm wine, so strong as to cause violent head aches.[‖] In other parts of the narrative he mentions grape wine; so that in this division of Asia, we have evidence of the use of three kinds of exhilirating or intoxicating liquor, wine from grapes, palms, and barley.

Let us now attend to Dr. Henderson: he begins the first portion of his work with a chapter on the vineyards of the ancients. On this topic he informs us of the soils, and the exposure they selected, and of the various modes of planting and training the vine. There seems to have been some difference of opinion regarding the height to which it should be trained: Cato, Pliny, and Columella recommending lofty vines, and Saserna, father and son, celebrated writers on husbandry, condemning them. The varieties of the vine known to the ancients were very numerous, but for most of them it is impossible to assign modern appellations. The Aminean was a great favourite, which produced a rich and highly flavoured grape. There is a curious passage in Vopiscus' life of the emperor Florianus, in which the change of this grape from white to red at the commencement of his reign is marked as ominous.[**] The Nomentan, containing more mucilaginous matter than the former, was also a favourite vine. The *vitis apiana*, the modern muscat, which probably received its modern, as well as its ancient name from its liability to be attacked by bees or flies, was also in high repute. The ancients were extremely careful and judicious in selecting the vines best adapted to the various soils and situations; and some spots were planted only with a single species. The most interesting portion of this chapter relates to the expense and profit of an ancient, as compared with a modern, vineyard. On this subject Dr Henderson enters with considerable learning and research; the result is, that if Varro did not exaggerate (which there is rather reason to suppose he did) "the produce of a quantity of land equal to an English acre, would amount to upwards of 5 1/2 hogsheads, a quantity far above any thing that is derived from modern vineyards." (p. 34.) It ought, however, to be remarked, that the ancients forced quantity out of their vineyards, at the expense of quality; yet, after all, we must suppose great exaggeration in Varro's account, since uncommonly prolific vines in Grenada, where the climate is extremely favourable, occasionally furnish only about one-third the produce mentioned by that author. The returns, taken at a moderate estimate of produce and price, were among the ancients upwards of six per cent. for the money invested in a vineyard.—In Burgundy, about seven per cent. in Champagne not much above one-third of this.

In this chapter as well as in some other parts of his work relating to ancient wines, we think Dr Henderson has too much overlooked those Greek authors who would have afforded him information on the management of the Greek vineyards, vintage, &c. in those points in which it differed from the Roman management. We would refer him particularly to Theophrastus, *de Plantis*, Hesiod [*Opera et Dies*,] Xenophon [*Memorabilia*, Lib. 5,] Longus, and some passages in the Iliad and Odyssey, and in Aristophanes with the Scholia on them. On the subject of the diseases to which the vines are liable, and the insects and animals by which they are attacked, and of the means of prevention adopted by the ancients, he is silent; indeed these topics, as well as the minutiæ of their training, grafting, &c. as he remarks, are foreign to the more immediate object of his work. But as some of these topics illustrate ancient authors, a notice with this view would have been acceptable. As an instance of what we mean, we shall advert to the mode adopted by the ancients to protect their grapes from goats, foxes, &c. That most beautiful and living description of the engraving on the shepherd's cup in Theocritus [*Idyll.* 1.] is illustrated by the custom of the ancients stationing boys to protect the ripe grapes from the fox And Isa. i. 8, and Job, xxvii. 18, allude to the temporary huts covered with boughs erected in ancient vineyards, for the shelter of the watchmen.[*] Hasselquist informs us, that the jackall in the east often destroys whole vineyards; the fondness of the fox for grapes is proverbially known; and the festival celebrated by the Athenian husbandmen in honour of Bacchus, at which they sacrificed a goat, was undoubtedly derived from the destruction caused by that animal to his favourite tree. Dr. Henderson has displayed so much felicity and taste in his illustrations of the ancient writers, that we are sorry he has allowed any direct and proper opportunity of extending and varying these illustrations to escape him.

The second chapter relates to the management of the vintage, and the process used by the ancients in the preparation of their wines. Their vintage generally began in September, and they were careful in commencing it with those parts of the vineyard that had attained the greatest maturity; the first collected grapes in their opinion yielded most must; the second gathering the best wine; the third the sweetest. The practice of twisting the stalks, and stripping the leaves, and leaving the grapes thus exposed to the sun—which is still pursued for rich wines—was followed by the ancients. Theophrastus, in his treatise to which we have already referred, informs us that occasionally a light dust was thrown over the grapes to defend them from the heat of the sun. The various modes of preparing the must, the names and qualities of it when prepared in these different modes—the wine-press—the admixture of salt water, and other ingredients still more abhorrent to a modern taste, such as pitch, southern wood, and various aromatic herbs, are treated of in a full and clear manner. We agree with Dr. Henderson, in his conjecture, that several of the strange ingredients which, according to Columella, ought to be added to wine, were, in fact, added for the purpose of clarifying as well as of perfuming it; but, after all, this chapter leaves on the mind of a modern reader no high idea of the taste of the ancients, nor of the excellence of their wines, if they were manufactured according to the prescriptions of that auther. In this chapter, too, we miss all allusion to the songs of the vintage, a subject which would have relieved its necessarily dry details. The songs of the wine-press of which we have two in Anacreon [*Odes* 50, and 52,] and others sung during the dinner of the vintagers, and in the different intervals of the day, accompanied with dancing, as well as the festivals at the conclusion of the vintage, are often alluded to or described in ancient authors. Dr. Henderson, also, should have referred us to Hesiod, who, in his *Opera et Dies*, has described the most simple, and it seems to us, the original mode of making wine from the juice which spontaneously flowed from the grapes.[*] This mode, adopted by the Greeks in his time, in some important particulars differs from that described by Dr. Henderson from Pliny—p. 39.

(*To be continued.*)

LADIES' DEPARTMENT.

THE UNNATURAL MOTHER.

[*From the Sermons of the celebrated William Cobbett.*]

> "Even the Sea-monsters draw out the breast: they give suck to their young ones."
>
> LAMENTATIONS, ch. iv. v. 3.

(*Concluded from page 356.*)

IT becomes wives, and young wives in particular, to think well of these things; to reflect, that she who disinherits her son from the moment he sees the light, voluntarily abandons *half her claims as a wife* and *all her claims as a mother*. Marriage is a human institution intended to prevent promiscuous intercourse and to secure the careful rearing up of children. But, if mothers cast off their children, one object of the institution is not answered; and that law appears unjust which enforces fidelity in the husband and duty in the child, towards a wife and mother, who has refused to perform her duty towards either. A son, who is able to maintain his mother, is, by law, compelled to do it, in case she stands in need of *relief*. But, is this *just*, if the mother have robbed him of that which nature awarded him, and exposed him to the manifest risk of perishing in his infancy! And, under different circumstances, under circumstances where the law is silent, and where filial affection is the only tie, what affection, what obedience, what respect has she to expect from a son, when that son knows, that she banished him from her breast, and that he owes his life, and, perchance, his disease and debility, to the mercenary milk of a hireling: when he knows, that, in the true sense of the word, she has made him a *bastard*: it being impossible that a child can be basely *born*, and it being notorious, that the uniform custom of men has been to give the appellation of *bastard* to all animals borne by one and suckled by another! Let it not be pretended, that a hireling will feel for the child that which the mother would feel, that she will have the same anxieties and take the same care. Nature, which causes the stream to start when the mother's ear meets the sound of the longing voice of the child, as which of us has not seen the milk of the ewe begin to drop the moment she heard the demanding voice of the lamb, though at the distance of half the field; nature, which creates this wonderful sympathy, gives the lie direct to all such false and hypocritical pretences. When the rival mothers came before Solomon, "The king said, bring me a sword: divide the living child in two, and give half to the one, and half to the other. Then spake the woman whose the living child was, unto the king (for her bowels yearned upon her son,) and she said, O, my Lord! *give her the living child and in nowise slay it.* But, the other said, Let it be neither mine nor thine, *but divide it.*" Never was there a more happy illustration of the difference in the feelings of a real and those of a pretended mother. Observe, too, that the hireling must begin by being herself an *unnatural mother;* she must begin by robbing her own offspring of his birthright; by driving him from her breast, and, ninety-nine times out of a hundred, from her sight: she must begin by doing that which even the *sea-monsters* are not guilty of, and which is condemned by the uniform practice of every beast of the field and every fowl of the air.

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[*] Plut. de Osiride.

[†] Heliod. Æthiop. lib. iii. p. 150.

[‡] The general, not the universal, for this historian informs us, that one article of Grecian exportation to Egypt was wine in great quantities, twice a year, in large jars, lib. iii, c. 6.

[§] Ancient Universal Hist. vi. 176, note.

[‖] Ibid. 445

[**] Vopisc. Florian apud Histor. August. Scriptor. p. [illegible] Edit. Schrevelii. Lug. Bat. [illegible]

[*] Watch Towers were sometimes erected in them, Isaiah, v. 1, 2. Messrs. Mangles and Irby saw some near Hebron that appeared to be antique [Travels in Egypt, &c. 342.] Sometimes the vineyards were protected by stone walls [Proverbs, xxiv. 31,] these also Messrs. Mangles and Irby saw in Syria, [illegible].

[*] Hesiod, Opera et Dies, v. 610, &c.

And, from a son of such a mother, whether the hirer or the hireling, is the mother, when he has escaped death and grown up to manhood, to expect that obedience, which can only be the effect of filial affection? Solomon, Prov. chap iv. v. 1, to 4, in inculcating obedience, states how he listened to his own parents, and gives this reason for his attending to their precepts: "For, I was my father's son, tender and only beloved in the sight of my mother." That is, that he was the favourite son of his father, and that his mother loved him in an uncommon degree This was the foundation on which he rested the obedience of children; this was the cause to which he ascribed his having listened to their advice. But, what, then, is a mother to expect from a son, who fails not and who cannot fail, to know, that he was a cast off from his mother's breast? What gratitude is he to feel towards one, who, from love of pleasure or from love of gain; from a motive the most grossly disgusting or the most hatefully sordid, left him to take, in a stranger's arms, the even chance of life or death?

The general deportment of mothers towards children that they have driven from their breast is very different from what it would have been if they had duly performed their duties as mothers. The mere act of bringing forth a child is not sufficient to create a lasting affection for him A season of severe suffering is not calculated to leave behind it a train of pleasing and endearing reflections. It is in her arms and at her breast that he wins her heart for ever, and makes every pang that he feels a double pang to her. "Can a woman," says Isaiah, chap xlix v 15, "*forget her sucking child*, that she should not have compassion for him?" But, if the mother have merely brought him into the world; if none of the endearments of the cradle; if none of the intercourse of babe and nurse have taken place between them; if the mother have, in the fulness of her fondness and amiable partiality, nothing to relate and to boast of in the history of his first twenty months; if this space be with her a blank in his life, *she never loves him as a mother ought to love;* while he, taught by unerring nature, is quick as lightning in penetrating her feelings, and repays her with that indifference and coldness which, though a punishment of great severity, are her just reward.

Wives, and young wives in particular, let me beseech you to reflect on these things. Let me beseech you to cast from you, not your children, but those crafty flatterers who would persuade you, that to preserve your health and your beauty, you must become unjust, cruel, base, gross and unnatural; that, to provide for your health, you must dam up the fountains the flow of which is in many cases necessary to your very existence; and that, to make yourselves objects of love, you must cast from you that which of all things in the world is best calculated to rivet to you the hearts of your husbands. But, after all, *old age must come;* and then where are you to look for the great comforter of old age; the affection and attention and obedience of children? For, always bear in mind, that he, who has not known a mother's breast, *has no mother!* As you recede he advances; while decrepitude and deformity are creeping over you, he is bounding on in all the pride of health, strength and beauty. Tender and most affectionate mother as you may have been, and, as it is to be hoped the far greater part of you will be, he still stands in need of the command of God: "Hearken unto thy father, and *despise not thy mother when she is old.*" But, if, even in such a case, the precept is necessary, what is to bind the son in cases where, from the unnatural conduct of the mother, the precept does not apply? If the son have grown to manhood with a knowledge of his infant bastardized state; for to hide this from him or to make him forget it is impossible; if he have grown up in habitual coldness and indifference towards you, how are you, when age and deformity and approaching dissolution have laid their hand on you, to expect reverence and attentive listening at his hands? Nothing is more praiseworthy, nothing more truly amiable, than to see men, grown up to the prime of life, listening with attention to the voice of their parents; but, is this to be looked for, or even hoped for, in the absence of filial affection? And how, amidst all the other objects of affection, which passion creates in the breast of youth, is that affection to exist, unless implanted in infancy and cherished all the way up to manhood? And how is it to be implanted, if the mother cast off the child to a hireling breast?

There is indeed, amongst the monsters in human shape, now-and-then a son to be found, who can despise the counsels and even mock at the supplications and tears of the affectionate, and tender mother, whose breast has nourished him; who has known no joy but in his smiles, and no sorrow but in his wailing; who has watched with trembling anxiety every quiver of his speechless lips; to whose heart every writhing of his infant body has been a dagger; who has wholly forgotten, amidst the dangers of contagion, her own life while his was in danger: there is, amongst the monsters in human shape, now-and-then to be found the son of such a mother to mock at her supplications and her tears. But, let us hope, that, in England at any rate, such sons are rare indeed. And, even in such a case the mother has this consolation; that the fault has not been hers; that she has done her duty towards God and towards her child; and that, if she have an unnatural son, she has every just and humane heart to sympathise in her sorrows.

But, under similar circumstances, what consolation has the *unnatural* mother? How is she, who cast her son from her breast, to complain of his want of affection? Old age has overtaken her, the fancied beauty, for which she bartered his birthright, is gone for ever. The gay hours, which she purloined from the cares of the cradle, are all passed away, and cannot be replaced by the comforting conversation and heart-cheering obedience of her son. She now feels the force of the maxim, *No breast, no mother.* The hireling is more his mother than she. The last stage of life is no season for the officious attention of friends; and he, who would have been worth all the friends in the world, has in his breast no feeling sufficiently strong to draw him to this scene of sadness. If held by some tie of interest, his hypocrisy, which he cannot disguise from the sharp sight of conscious want of duty, only adds to her mortification; and, though she roll in riches, she envies the happy mother in rags. Thus, without a single ray to dissipate the gloom, she passes on to that grave, on which she knows not a tear will be shed, and in her fate proclaims to the world the truth, which cannot be too often repeated, that the duties of children and those of parents are reciprocal, and that, to insure the performance of the former, the latter must first be performed.

SPORTING OLIO.

THE FIELD DOG.

Sassafras Neck, Cecil county, Md. Jan. 25, 1826.

Mr. Skinner,

Having lately perused with much interest the various sporting communications in your paper, I have thought that the performance of the *dog* is entitled to a share of the praise given to the sportsman.

It will be admitted by every one acquainted with woodcock and partridge shooting, that a good dog is a matter of importance, and that a bad one had better be left in the kennel. If those who favour you with the result of successful shooting, would mention the performance of the dog, if truly fine; and also his owner's name, together with a short pedigree, it would be highly acceptable to those who take a delight in improving the breed. A dispute has been maintained in the English sporting journals, whether the setters or pointers are in the whole preferable, it would be well to name the kind of dog, that this question might be in some measure settled.

I am induced to call the attention of sportsmen to this on account of having been so much disappointed in dogs. I am convinced that many breeds of the setter and pointer, although broken upon the most approved system, are worth but little, while others, with scarcely any pains, are invaluable in the field. It is to be hoped that those who are zealous to promote a particular breed should not decide positively in favour of it, until ample experience had been derived in comparison with many others; nor recommend it, until they were satisfied that it possessed, in the highest degree, the traits of *humility, staunchness, nose* and *activity.* It is a fault among sportsmen, and has been ridiculed in the "Annals of Sporting," that "every one thinks there is but one good dog in the world, and he has it." For myself, I have taken some pains in improving the breed of the setter; yet am free to confess that my stock (except that derived from *Old Czar*, of Baltimore, which is too young to hunt,) has been completely beaten by an old *setter*, nameless* and fameless, and therefore feel anxious to know where the best breed is to be found.

Philokuon.

Dear Sir, *Frederick county, Jan. 23, 1826.*

Although I disclaim all merit to the introduction of the shot cartridge, yet I have great pleasure in replying to the inquiries of "Scolopax." I first saw them used by an officer of the Royal Artillery in 1811, at that time my shooting companion, and a most accomplished sportsman. We shot a great deal together, and used the cartridge exclusively—as far as my experience enables me, I give it decidedly the preference to any other mode; there is *none* so convenient or so gentlemanly.

In dry weather I have seldom found any difficulty in ramming home the cartridge, at least none more

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[*Ought not our correspondent to have given the name of this excellent dog, that it might be recorded in the Sporting Olio.]

than is experienced after a few loads in using the card. In shooting the naked shot, the friction of the lead upon the barrel will unavoidably form a crust—the cartridge prevents this. I admit, that in wet damp weather, the atmosphere will render the paper too pliant, and the pressure of the ramrod, in ramming it down, will frequently cause it to distend so as to choke; but the screw will readily draw up the top of the cartridge, and the shot will shake out. This will satisfy "Scolopax" that stiff paper is preferable if it be not too thick; the common cartridge paper answers best—it is cut into oblong squares of 3 inches by that width, which will wrap twice round the roller upon which they are formed—they should not be made to fit too tight to the cylinder of the gun; and I would recommend all gentlemen who shoot with a double gun, to use the barrels alternately for many reasons, which will easily be understood.

The belt must have separate divisions of tin tubes for each cartridge, of an inch and a half in length—the whole must be covered with a leather flap to protect them from the weather—the number it will contain of course depends on the size of the wearer, and the cylinder of his gun. A more convenient plan still (and one which I prefer) is to sew three divisions of tin tubes, say ten in each division, on each side of the waistcoat.

If "Scolopax" will make the experiment he will find that in using the cartridge, his gun will throw more shot into a given space at any distance, and plant them deeper than in the usual way of loading. It seems that the *action* of the powder upon the shot in its confined state, is much greater, and the impulse, is more equally communicated to the pellets.

I will send shortly to Mr Haslett, gun smith, in Baltimore, my roller, with a few cartridges, where it can be seen and explained to those interested.

Respectfully, &c.
SAMUEL WOODCOCK.

THE FARMER.

Baltimore, Friday, February 3, 1826.

Field Sports.—It gives us pleasure to intimate to the lovers of field sports, that we have reason to feel assured that the appropriation of a small portion of the Farmer to *their* use and amusement, though condemned by a few, is, upon the whole, approved and encouraged. There is, in a word, a decided and growing taste for such amusements, and for discussions calculated to enhance the pleasures of those healthful diversions that necessarily conduct gentlemen from the bar-room and the gaming table into the open air and over the fields; where

> "The huntsman ever gay, robust and bold,
> Defies the noxious vapour, and confides
> In this delightful exercise to raise
> His drooping head, and cheer his heart with joy."

It is, however, as we trust, well understood, that we would not inculcate a fondness for rural sports to an extent that would involve the neglect of any man's cardinal duties and pursuits. They cannot be too little estimated, who, whatever may be their fortunes, can pass their lives in listless idleness, doing nothing to benefit society, or to add to the stock of human comforts or human knowledge, lounging drones, *nati consumere fruges*, but on the other hand, we hold that the greater the industry, and the more constant the application of our faculties to useful business, the greater the necessity for, and the benefit of relaxation and amusement. That the best bow, will lose its elasticity if never unstrung, every boy can understand, and even scripture tells us, there is a time for all things. The question in reference to amusements is, as to their *kind and degree*, and though it may savour of egotism, yet as it will prove our sincerity, and better explain our meaning, we may mention our own practice, in reference to the management of those who are "bone of our bone and flesh of our flesh." To the elder son, not yet in his teens, a fine boy who is fond of his book, but rather desultory in his course of reading, we have given a violin, on which he can amuse himself and his parents with other tunes besides *Yankee Doodle*—a pair of good skates, which he uses gracefully—and as a special *reward* for good conduct, he received at the last holidays a *gun*, that when he can get time he may hie away to the country, taking his faithful and subtle dog, that

> "—— ——— scours with sagacious nose
> Along the field, and snuffs each breeze that blows."

The next son, who is fonder of the house and the society of the ladies and fireside amusements, is learning to play well on the piano and to sing: and if some of our readers, more rigid than the rest, would esteem all this to be frivolous, and demand the *philosophy*—the moral—of it; we are ready to give, and as we think, to justify it. If we had twenty sons, we should wish them all to excel, first in *honourable and virtuous principles;* then in useful knowledge and polite accomplishments, in the art of swimming, skating, riding, shooting, and such like sources of innocent amusement, as have a tendency to strengthen the body and recreate the mind; all this we desire for our children as fervently as we pray for and inculcate upon them a detestation of the bottle, the bar room, the dice box and the cock-pit, to some or all of which young men are too apt to betake themselves, if not familiar with, and fond of the gentlemanly exercises and accomplishments that carry them by the light of heaven into open air,

> "And in thy right hand lead with thee
> The mountain nymph, sweet Liberty;"

or else into the society of the more chaste and softer sex, where vice and grossness of manners and conversation are never contracted, or even seen, but to be contemned and scouted.

☞The "Extracts," sent by a friend on the Eastern Shore of Maryland, are highly curious and instructive. We regret that they should have been omitted in this number. We should be glad to hear often, in the same way, from a gentleman who so well knows how to enjoy *otium cum dignitate*, and wish he would consider a few columns as always at his command.

☞There was lately published in an Ohio paper, which has been mislaid, an article on the culture, &c. of tobacco, from a gentleman in Baltimore to a friend in that state. We should be glad to have the paper containing it, that we might republish the article, though so much has been said on that subject in previous volumes; as we have many new subscribers in Ohio lately, who desire information on the subject. To the Representatives from Ohio, we shall send, for distribution, the seed of the bright yellow tobacco.

Tobacco.—Inspections in the three state warehouses for the month of January, 83 hhds.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	WHOLESALE. to	RETAIL. from	RETAIL. to
BEEF, Baltimore Prime,	bbl.	8 50			
BACON, and Hams, . .	lb.	7	11		
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java, ...	—	18	19	22	25
Havana, ...	—	15	17	18	20
COTTON, Louisiana, &c.	—	16	18		
Georgia Upland, . . .	—	14	14½		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½		14	16
Dipt, ...	—	10	11	11	12½
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90	95		
FLOUR, Superfine, city,	bbl.	4 62	4 75	5 50	6 25
Fine, ...	—	4	4 25		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	55	60	62	65
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	60	87		
do. Red, ...	—	80	85		
do. White Flint, . .	—	2 00			
Rye, ...	—	55	58		
Barley, ...	—	90	95		
Clover Seed, Red . .	bush	4 50		5	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	—	1 75	2 00		
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	40		42	
Beans, White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	30	37	50
HOGS' LARD, ...	—	9	10	12	
LEATHER, Soal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45		62	75
Havana, 1st qual. . .	—	30	31		
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	2			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2 00	2 12		
OIL, Whale, common, .	gal.	30		40	50
Spermaceti, winter .	—	70		88	1 00
PORK, Baltimore Mess,	bbl	12 00			
do Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	6 00	6 12		
RICE, fresh, ...	lb.	3	3½	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
do. Brown, .	—	5½	7	6	12
WHISKEY, 1st proof, .	gal.	24½	26	38	50
PEACH BRANDY, 4th pr	—	1 00		1 25	
APPLE BRANDY, 1st pr	—	35	37	50	
SUGARS, Havana White,	c.lb.	13 50		15	16
do. Brown, . .	—	10	10 50		
Louisiana, ...	—	8 50	9 75	10	11
Loaf, ...	lb.	19	22	20	23
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	75	80	1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	17½		25	
SALT, St Ubes, ...	bush	40	45		
Liverpool Blown . .	—	63		75	
SHOT, Balt. all sizes, .	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 30	2 00	
Lisbon, ...	—	1 15	1 25	1 50	1 75
Claret, ...	doz	4	8	5 00	9 00
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	25	30		
Common, Country, .	—	25			
Skinners' or Pulled,	—	33	35		

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AGRICULTURE.

ON BREEDING SHEEP, &c.

By John Hare Powel, Esq.

[Where the opinions of a writer are canvassed, fair discussion requires that they should be well understood by the party opposing them, and therefore we have extracted a letter from the Memoirs of the Pennsylvania Agricultural Society, to shew that Col. Powel has strenuously urged the adaptation of particular breeds to particular circumstances, climates and soils.

Where the population is thin, and the consequent demand for flesh is small, the value of the fleece is the more important object of regard, and he has endeavoured to shew how this important product can be increased in value and in amount. Sir John S. Sebright, who was one of the most successful breeders of sheep in Great Britain, at the request of Sir Joseph Banks, who was one of the earliest promoters of Merino sheep in England, and with all the zeal which characterized the career of this profound philosopher, urged the publication of Sebright's opinions, which had been, by his *sheep* brought into notice.]

Dear Sir, *Powelton*, 1824.

The forms of the various breeds of British sheep are distinct, as the districts whence they take their names. The objects to be attained in Great Britain, and most parts of America, are a quick return in *flesh*, and fleece, with as little offal, as is compatible with the due proportion of bone, indispensable for the healthful exercise of the animal, or the exertion necessary for the supply of its food. We find that particular breeds, have been for ages retained in certain parts of Europe, where the shape of the animal, has been made conformable to the purposes, to the climate, to the food, and face of the country upon which it has been reared. On the mountains of Scotland and Wales—on the bare chalk hills of the southern and western parts of England, races of sheep have always been bred, which by the lightness of their carcasses and the activity of their muscles are enabled to find sustenance, and by the closeness of their fleeces, are fitted to endure the exposure which in mountainous regions, must always be met. In the rich vales of Leicestershire, and highly cultivated marshes of Lincolnshire, and other counties in the North, families, the very opposite to these have been as carefully bred, possessing heavy carcasses, long wool, shorter legs, very small bone, with the most sluggish dispositions, without either the desire, or the power to make exertion to obtain food. In the western parts of America, where the population is thin and the consequent demand for flesh exceedingly small, attention to the carcass of the sheep, has not been properly given. The value of its fleece is certainly the more important object of regard, as the difficulty of transporting the wool, when manufactured into cloth, is so much diminished, by the condensed value of the commodity, that a market is found at little cost. But it is to be apprehended, that disregard of shape and inattention to the rules of breeding, will eventually injure the constitution of the sheep, and materially affect the useful secretions, and consequently the quality, and weight, of the wool. This mistake has not been confined to those parts of our country where the carcass can with difficulty be sold, but may be traced in some large Merino flocks in the neighbourhood of the great towns. The extraordinary power, which the vigilance, and science of some distinguished breeders in England, have shown, in varying the forms, and even in assigning, if the phrase may be used, definite properties, shapes, and even peculiar colours, to whole families of neat cattle and sheep, can scarcely be believed, except by those who have seen the animals thus improved.

An able exposition of the scientific principles and practical deductions upon which their art has been founded, was made some years since by one of the most eminent surgeons in Europe, the celebrated Henry Cline, whose authority has been universally received, by practical men, except upon one point—the injurious effect of breeding closely in.

Sir John S. Sebright, at the instance of Sir Joseph Banks, has published an excellent paper, which as it exposes the error of Mr. Cline and evinces perfect knowledge of the breeder's art, I have recently obtained from England, and have now the honour to present.

I am, with great respect, yours, &c.

JOHN HARE POWEL.

Jonathan Roberts, Esq.,
President of the Penn. Agricul. Society.

The Art of Improving the Breeds of Domestic Animals—in a letter addressed to the right hon. Sir Joseph Banks, K. B.—by Sir John Saunders Sebright, bart., M. P.

Dear Sir,—I have not the presumption to think, that I can throw any light upon the art of improving the breeds of domestic animals, which is now so well understood in this country: but in obedience to your commands, I print these observations, to which I am sensible you have attached more value than they deserve.

The attention which gentlemen of landed property have, of late years, paid to this subject, has been extremely beneficial to the country; not so much by the improvements which they themselves have made, as by the encouragement which the professional breeders have received from their patronage and support, without which they could not have carried the breeds of cattle and sheep, to the perfection which many of them have now attained.

They have, likewise, been the means of making the best breeds known in every part of the kingdom, and of transporting them to districts, where it is not probable they would have been introduced, but through their agency.

The Duke of Bedford, Mr. Coke, and some few others, have not only been the liberal patrons of the professional breeders, but have themselves made great improvements in the breeds, to which their attention has been directed.

The same success has not, in general, attended gentlemen in this pursuit: the best breeds, after having been obtained by them at a great expense, too frequently degenerate in their hands, from mismanagement. They conceive, that, if they have procured good males and good females, they have done all that is necessary to establish and to continue a good breed; but this is by no means the case.

Were I to define what is called the art of breeding, I should say, that it consisted in the selection of males and females, intended to breed together, in reference to each other's merits and defects.

It is not always by putting the best male to the best female, that the best produce will be obtained; for should they both have a tendency to the same defect, although in ever so slight a degree, it will in general preponderate so much in the produce, as to render it of little value.

A breed of animals may be said to be improved, when any desired quality has been increased by art, beyond what that quality was in the same breed, in a state of nature: the swiftness of the race-horse, the propensity to fatten in cattle, and the fine wool in sheep, are improvements which have been made in particular varieties of the species to which these animals belong. What has been produced by art, must be continued by the same means, for the most improved breeds will soon return to a state of nature, or perhaps defects will arise, which did not exist when the breed was in its natural state, unless the greatest attention is paid to the selection of the individuals who are to breed together.

We must observe the smallest tendency to imperfection in our stock, the moment it appears, so as to be able to counteract it, before it becomes a defect; as a rope-dancer, to preserve his equilibrium, must correct the balance, before it is gone too far, and then not by such a motion, as will incline it too much to the opposite side.

The breeder's success will depend entirely upon the degree in which he may happen to possess this particular talent.

Regard should not only be paid to the qualities apparent in animals, selected for breeding, but to those which have prevailed in the race from which they are descended, as they will always show themselves, sooner or later, in the progeny: it is for this reason that we should not breed from an animal, however excellent, unless we can ascertain it to be what is called *well bred;* that is, descended from a race of ancestors, who have, through several generations, possessed, in a high degree, the properties which it is our object to obtain.

The offspring of some animals is very unlike themselves; it is, therefore, a good precaution, to try the young males with a few females, the quality of whose produce has been already ascertained: by this means we shall know the sort of stock they get, and the description of females to which they are the best adapted.

If a breed cannot be improved, or even continued in the degree of perfection at which it has already arrived, but by breeding from individuals, so selected as to correct each other's defects, and by a judicious combination of their different properties, (a position, I believe, that will not be denied,) it follows that animals must degenerate, by being long bred from the same family, without the intermixture of any other blood, or from being what is technically called, *bred in and in.*

Mr. Bakewell, who certainly threw more light upon the art of breeding than any of his predecessors, was the first, I believe, who asserted that a cross was unnecessary, and that animals would not degenerate, by being *bred in and in,* which was at that time the received opinion.

He said, you could but breed from the best. Of this there can be no doubt; but it is to be proved, how long the same family, *bred in and in,* will continue to be the best.

No one can deny the ability of Mr. Bakewell, in the art of which he may fairly be said to have been the inventor: but the mystery with which he is well known to have carried on every part of his business, and the various means which he employed to mislead the public, induce me not to give that weight to his assertions, which I should do to his real opinion, could it have been ascertained.

Mr. Meynel's fox-hounds are likewise quoted as an instance of the success of this practice; but upon speaking to that gentleman upon the subject, I found that he did not attach the meaning that I do, to the term *in and in.* He said, that he frequently bred from the father and the daughter, and the mother and the son. This is not what I consider as breeding *in and in;* for the daughter is only half of the same blood as the father, and will probably partake, in a great degree, of the properties of the mother.

Mr. Meynel sometimes bred from brother and sister: this is certainly what may be called a *little close;* but should they both be very good, and, particularly, should the same defects not predominate in both, but the perfections of the one promise to correct in the produce the imperfections of the other, I do not think it objectionable: much further than this, the system of breeding from the same family cannot, in my opinion, be pursued with safety.

Mr Bakewell had certainly the merit of destroying the absurd prejudice which formerly prevailed against breeding from animals, between whom there was any degree of relationship; had this opinion been universally acted upon, no one could have been said to be possessed of a particular breed, good or bad; for the produce of one year would have been dissimilar to that of another, and we should have availed ourselves but little of an animal of superior merit, that we might have had the good fortune to possess.

The authorities of Mr. Bakewell, and of Mr. Meynel, being generally quoted, when this subject is discussed, I have stated, why I reject that of the former altogether, and that the latter, in point of fact, never fairly tried the experiment.

I do not find that any of the many advocates for breeding *in and in*, with whom I have conversed, have tried it to any extent; they say, that it is to perfect animals only that the practice applies; but the existence of a perfect animal is an hypothesis I cannot admit

I do not believe that there ever did exist an animal without some defect, in constitution, in form, or in some other essential quality; a tendency, at least, to the same imperfection, generally prevails, in different degrees in the same family. By breeding *in and in*, this defect, however small it may be at first, will increase in every succeeding generation; and will, at last, predominate to such a degree, as to render the breed of little value. Indeed, I have no doubt but that by this practice being continued, animals would, in course of time, degenerate to such a degree, as to become incapable of breeding at all.

The effect of *breeding in and in* may be accelerated or retarded by selection, particularly in those animals who produce many young ones at a time. There may be families so nearly perfect as to go through several generations, without sustaining much injury, from having been bred *in and in;* but a good judge would, upon examination, point out by what they must ultimately fail, as a mechanic would discover the weakest part of a machine, before it gave way

Breeding *in and in* will, of course, have the same effect in strengthening the good, as the bad properties, and may be beneficial, if not carried too far, particularly in fixing any variety which may be thought valuable.

I have tried many experiments, by breeding *in and in* upon dogs, fowls and pigeons; the dogs became, from strong spaniels, weak and diminutive lap-dogs, the fowls became long in the legs, small in the body, and bad breeders

There are a great many sorts of fancy-pigeons; each variety has some particular property, which constitutes its supposed value, and which the amateurs increase as much as possible, both by breeding *in and in*, and by selection, until the particular property is made to predominate to such a degree, in some of the most refined sorts, that they cannot exist without the greatest care, and are incapable of rearing their young, without the assistance of other pigeons kept for that purpose

The Leicestershire breeders of sheep have inherited the principles, as well as the stock of their leader, Mr Bakewell He very properly considered a propensity to get fat, as the first quality in an animal, destined to be the food of man: his successors have carried this principle too far, their stock are become small in size, and tender, produce but little wool, and are bad breeders

By selecting animals for one property only, the same effect will, in some degree, be produced, as by breeding *in and in* we shall obtain animals, with the desired property in great perfection, but so deficient, in other respects, as to be upon the whole an unprofitable stock.

We should, therefore, endeavour to obtain all the properties that are essential to the animals we breed. The Leicestershire sheep prove that too much may be sacrificed, even to that most desirable quality in grazing stock—a disposition to get fat at an early age, and with a small quantity of food.

Many causes combine to prevent animals, in a state of nature, from degenerating; they are perpetually intermixing, and therefore do not feel the bad effects of breeding *in and in;* the perfections of some correct the imperfections of others, and they go on without any material alteration, except what arises from the effects of food and climate.

The greatest number of females will, of course, fall to the share of the most vigorous males; and the strongest individuals of both sexes, by driving away the weakest, will enjoy the best food, and the most favourable situations, for themselves and for their offspring

A severe winter, or a scarcity of food, by destroying the weak and the unhealthy, has all the good effects of the most skilful selection. In cold and barren countries no animals can live to the age of maturity, but those who have strong constitutions; the weak and the unhealthy do not live to propagate their infirmities, as is too often the case with our domestic animals. To this I attribute the peculiar hardiness of the horses, cattle, and sheep, bred in mountainous countries, more than to their having been inured to the severity of the climate; for our domestic animals do not become more hardy by being exposed, when young, to cold and hunger. animals so treated will not, when arrived at the age of maturity, endure so much hardship as those who have been better kept in their infant state.

If one male, and one female only, of a valuable breed, could be obtained, the offspring should be separated, and placed in situations as dissimilar as possible; for animals kept together are all subjected to the effects of the same climate, of the same food, and of the same mode of treatment, and consequently to the same diseases, particularly to such as are infectious, which must accelerate the bad effects of breeding *in and in.*

By establishing the breed in different places, and by selecting, with a view to obtain different properties in these several colonies, we may perhaps be enabled to continue the breed for some time, without the intermixture of other blood.

If the original male and female were of different families, by breeding from the mother and the son, and again from the male produce and the mother, and from the father and the daughter in the same way, two families sufficiently distinct might be obtained: for the son is only half of the father's blood, and the produce from the mother and the son will be six parts of the mother and two of the father.

Although I believe the occasional intermixture of different families to be necessary, I do not, by any means, approve of mixing two distinct breeds, with the view of uniting the valuable properties of both: this experiment has been frequently tried by others as well as by myself, but has, I believe, never succeeded. The first cross frequently produces a tolerable animal, but it is a breed that cannot be continued.

If it were possible, by a cross between the new Leicestershire and Merino breeds of sheep, to produce an animal uniting the excellencies of both; that is, the carcass of the one with the fleece of the other, even such an animal so produced would be of little value to the breeder; a race of the same description could not be perpetuated; and no dependence could be placed upon the produce of such animals, they would be mongrels, some like the new Leicester, some like the Merino, and most of them with the faults of both

Merino rams are frequently put to Southdown and Ryeland ewes, not with a view of obtaining the good properties of both kinds, but from the difficulty of procuring Spanish ewes, and with the intention of obtaining the Merino blood in sufficient purity, for every practical purpose, by repeatedly crossing the female produce with Merino males.

I have no doubt but that better stock may be obtained, in a few years, in this manner, from a large flock of well chosen ewes, than by breeding, at first, from a small number of the pure Merino blood, (and many of them cannot be obtained,) for the great advantage to be derived from the means of selection afforded by a more numerous flock, will more than compensate for the little stain of impure blood, which would be insensible in a flock, crossed in this manner, for four or five generations.

The introduction of Merino sheep to this country opens a fine field for improvement: it has been ascertained, that neither the sheep nor the wool sustain any injury from the change of climate or pasture; and the absurd prejudice, that Merino wool could be grown only in Spain, is fortunately eradicated.

In comparing the Merino sheep with the Southdowns, which are allowed to be the best of our short woolled breeds, the former have very much the advantage, both as to quantity and quality of wool, but, I believe, the latter would produce by far the greatest quantity of meat, from a given quantity of food, which is the criterion by which we determine the relative value of all animals as grazier's stock.

Taking the gross produce, both of wool and carcass, at the present prices, the Merino breed may perhaps be the most profitable, but should it be generally introduced, fine wool would become cheaper, and mutton dearer; it is therefore not easy to form a conclusive opinion upon this subject.

Great improvements may undoubtedly be made in the Merino breed, as to their disposition to get fat. Their advocates say, with truth, that the Southdown sheep were but a few years ago as imperfect in shape as the Merino now are; but they should recollect, that a disposition to fatten at an early age was always the characteristic of the Southdown breed, even in its most unimproved state, and that it was from its possessing this very essential quality that so much attention has been paid to it.

It is well known that a particular formation generally indicates a disposition to get fat, in all sorts of animals; but this rule is not universal, for we sometimes see animals of the most approved forms, who are *slow feeders*, and whose flesh is of a bad quality, which the graziers easily ascertain by the *touch.* The disposition to get fat is more generally found in some breeds than in others. The Scotch Highland cattle are remarkable for being almost all *quick feeders*, although many of them are defective in shape. The Welch cattle have but little disposition to get fat: not from being particularly ill-shaped, but because they are almost invariably what the graziers call *bad handlers.*

We must not, therefore, suppose, that the bad shape of the Merino sheep is the sole cause of its being so ill calculated for the purpose of the grazier.

An observation which Dr Genner made to me about ten years ago, (the truth of which has since been confirmed by my own experience—that no animal whose chest was narrow could easily be made fat,) applies particularly to the Merino sheep, who are in general contracted in that part, and is well worth the attention of those who wish to improve this breed.

Perhaps the great secretion of yolk, so essential to the production of fine wool, and which is excessive in the Merino sheep, may be incompatible with the fattening quality

I have always found the fineness of the fleece in exact proportion to the quantity of yolk it contained. Those who are unaccustomed to examine wool, may consider this as a certain criterion of its quality: for although the hair of some dry fleeces may be fine, it will always want the elasticity which is so much valued by the manufacturer.

It is to be regretted, that so little attention has been paid to the improvement of British wool, and particularly to that of the short-woolled breeds: a fine fleece is not only more profitable to the owner, but from the closeness of its texture, and the quantity of yolk it always contains, is a much better protection to sheep in bad weather, than the open and hairy covering which too generally disgraces our flocks.

This extraordinary negligence in the sheep-breeders may, in some degree, be accounted for, by the manner in which the wool-trade is carried on. The *growers* are seldom well acquainted with the value of this article, or indeed with its quality, and the *buyers* find their account in fixing a general price every year, for the wool of each breed, without making any distinction between the very different quality of the pile of different flocks.

It is likewise the custom, in many parts of England, for the growers to deliver their wool to the buyers, upon their engaging to give them the highest price of the year: such bargains (and they are very general,) are of course strong inducements to the purchasers not to give the full value for any wool that may be offered to them of a superior quality.

The fineness of the fleece, like every other property in animals of all kinds, may be improved by selection in breeding. The opinion, that good wool could only be produced in particular districts, is a prejudice which fortunately no longer exists.

Climate, food, and soil, have certainly some effect upon the quality of wool, but not so much as is generally supposed. The fleece is affected by the degree of nourishment which the animal receives, not by the quality of the pasture on which it is fed. If sheep are highly kept, their wool will become less fine, but in other respects its quality will not be deteriorated. The wool of a starved sheep may be apparently fine, but it will be brittle, and of little value to the manufacturer.

A regular supply of food to the sheep is essential to the growth of good wool; for that part of the hair which grows when the animal is in a high state of flesh, will be thick, and that which is grown when it is reduced by hunger, will be weak and thin; and consequently the thickness of hair will always be irregular, if the animal passes from one extreme to the other.

The alteration which may be made in any breed of animals by selection, can hardly be conceived by those who have not paid some attention to this subject; they attribute every improvement to a cross, when it is merely the effect of judicious selection.

I have often been told, that from the beautiful shape of Mr. Elman's Southdown sheep, they must have been crossed with the New Leicester; and that from the fineness of their wool, they must have been crossed with the Merino breed; but I do not conceive, that even the skill of this very distinguished breeder could have retained the good shape of the former, without any appearance of the coarseness of its wool or the fine fleece of the latter, without the deformity of its carcass, had he crossed his flock with either of these breeds.

It may as well be contended, that the white pheasant, which has now become very common, was produced from a cross with a Dorking fowl, whereas it was one of those accidental varieties, which sometimes occur, and which has been perpetuated by selection. The same may be said of the endless variety in the colour, shape, and size, of rabbits, ducks, and pigeons, in a domesticated state; a variety produced by the art of man, and which did not exist in these creatures in their natural state.

A greater proof, I conceive, of what may be effected by selection and perseverance, cannot be adduced.

There is, perhaps, no means by which the breeds of animals can be so rapidly, and so effectually improved, as by its being the particular business of some breeders to provide male animals for the purpose of letting for hire. Our horses could never have arrived at the degree of perfection which they have now attained, but from the facility which has been afforded to every one, by the public stallions, of breeding from the best horses of every description, at a moderate expense.

The breeds of sheep to which this practice has been applied, have attained great perfection, while those which have never been attended to by persons in this particular business, show no signs of improvement.

No trouble or expense will be spared by those who expect to derive profit, not from the quantity, but from the quality of the animals which they breed. The competition, which must always exist between breeders of this description, will be a never-failing stimulus to exertion.

The common farmer, who seldom sees any stock but his own and that of his neighbours, generally concludes, that his own have arrived at the summit of perfection: but the breeder who lets for hire, must frequently submit his male animals to the inspection of the public, and to the criticism of his rivals; who will certainly not encourage any prejudices he may entertain of their superiority.

In this trade, as in every other, there ought to be a regular gradation; those, for example, who hire a male for eighty guineas, will be amply repaid by letting seven, or eight, for twenty guineas each, as will those who hire for twenty guineas, by letting several for five or six.

Thus each, besides the improvement of his stock, will receive a fair remuneration, and every breeder have the means of selecting the male he thinks best calculated for the females he may happen to possess.

The same effect will not be produced by the sale of male animals; for we are induced to keep a male we have purchased at a high price, although we may not be entirely satisfied with his produce, but by hiring, we endeavour to select a male every year, with the properties in which our females are deficient, and whom we think calculated to correct the faults which arise from time to time in our stock

These observations are the result of many years experience, in breeding animals of various descriptions; but the life of man is not long enough to form very decisive conclusions upon a subject which is so little understood, and which is darkened by innumerable prejudices. Many experiments must be tried, to establish a single fact; for Nature is sometimes so capricious in her productions, that the most accurate observer will be frequently deceived, if he draws any inference from a single experiment

I have freely stated my opinions, without considering them as conclusive, and shall be much gratified if they induce others to direct their attention to a subject which appears to me of great importance to the agricultural interests of this country.

I have the honour to be, dear sir,
With great regard,
Your obed't humble servant,
J. S. SEBRIGHT.

Beechwood, August 1, 1809.

BURNED CLAY.

[In a former number of this volume we published a communication from Doctor Muse to Dr. Ennalls Martin, on the subject of burned clay. The answer of Doctor Martin has only now fallen under our observation in the Easton Gazette, from which it is copied as follows.]

Dear Sir, *Easton, July 11th*, 1825.

I have frequently observed in the course of conversation with my agricultural friends, as I have done to you, that every farm in this county had resources within itself, which, if properly managed, would be sufficient to fertilize its soil, so as to make many blades of grass grow, where one would scarcely grow to perfection before; thus, according to the exalted sentiment of Dr. Swift, placing our farmers above the greatest conquerors, whose glory consisted in destroying their fellow men, while that of the farmer will ever be to provide for their subsistence and comfort.

Under these impressions, in looking around me, I could not think of a gentleman altogether equal to yourself in scientific knowledge and of the same ardour, as well as public spirit, to undertake the investigation of a subject, which would be most likely to make our farmers more useful and of higher character than the greatest conquerors of the earth.

Chemistry is so much connected with agriculture as well as the arts generally, that it may well be called its chief corner-stone, and if properly directed will have the happiest tendency to its improvement. Permit me to say, without any intention of flattering, that much is expected from you as an experimentalist as well as a theorist, on the subject of "burned clay," both as to the application as well as the *modus operandi* of this manure, which may be manufactured on almost all the farms of the Eastern Shore of Maryland.

General Beaston, as well as some of our modern farmers, have made the matter of burning clay a very simple process indeed; and so it may be, when properly understood; but until then, we shall be constantly hearing first one and then another expressing doubts as to its efficacy as a manure. You know, and every body ought to know, there is a right and wrong way of doing almost every thing; if the right way should not be fallen upon in burning clay, the object will be almost entirely defeated, and an end will be put to any further experiments with such persons!

As to the rationale of the *modus operandi*, it will be of little consequence to the farmer, if he can learn the art of burning the clay, and experience at all times its beneficial effects. But this alone will not satisfy the inquisitive mind, and one who is so capable as yourself of penetrating into the arcana of nature. I confess, I feel the same propensity, though I may come short of the truth, and differ with you as to the *rationale* of the *modus operandi* of a manure, the efficacy of which I have experienced to my satisfaction.

You believe that clay to become a manure must be burned in open kilns, and thus be oxydated; but I, on the contrary, am of an opinion, that the clay must be carbonated in close kilns, in the same manner as wood is charred or carbonated. If open kilns are necessary to make an oxyde of the clay, there will soon be an end put to this expensive method; but if it is to be burned in close kilns in the same manner as common coal kilns, it will be no more expensive to burn five hundred loads than it would be to burn five, for when the clay is completely ignited, it may be heaped on *ad infinitum.* The great object is to exclude the air altogether as in a coal kiln. If the air is permitted to have access to the wood, it will soon burn down to ashes, and if the air comes in contact with the clay, it goes out and the process ceases.

There is something mysterious in carbonating wood, and so of clay. It has been observed to me by blacksmiths and others who are in the practice of burning coal kilns, that green pine is equal, if not superior to any other wood. Now it is known that pine, and more especially its leaves, contain more oxygen, that is, the acidifying principle, than any other wood or its leaves; and I have observed, that wherever the pine-fallings, as they are called, that is, the leaves of the pine, have been deposited as a manure, the sorrel puts up in great abundance, and where it did not grow before. Hence the advantage of liming all such lands as those where sorrel grows, and I would say, hence the advantage of burning such lands, or putting on them "burned clay," to neutralize the acid in the soil. I am confident "burned clay" will be more beneficial on a soil of stiff clay, than on a light sandy soil, though my experiments on "burned clay," have been principally confined to a soil where sand predominates.

Clay, taken from below the surface, say two feet, and used in making bank fences, puts forth the first year an abundant crop of sorrel, and at once demonstrates that the clay had become a deutoxide, that is, had acquired by attraction from the atmosphere a second dose of oxygen, besides what was attached to it from tho creation. A view of the subject in this light demonstrates the absurdity of deep ploughing in every soil, and explains the reason why there ought to be an immediate application of a manure capable of neutralizing the acid qualities of the earth, when the soil is ploughed in below a certain depth in some particular fields.

That carbon enters largely into every kind of wood as a component part, is self-evident, from the circumstance of burning coal, as it is termed; and that it is a manure of the first degree, when reduced to an impalpable powder, has been proved over and over again, but from the labour and expense of applying it to the earth to act as such, it must necessarily be excluded; but not so with regard to *carbonated clay*—one stroke of the hoe or spade crumbles the largest lumps into dust, and makes it at once capable of mixing with the earth. Of all bodies in the world, carbon has the greatest attraction for oxygen, and makes carbonic acid gas when united. It is this gas which enters into the composition of vegetables by being applied to their roots, and becomes their chief food. Other elementary bodies have their share in perfecting trees and plants of every kind, but it is as plain as that two and two make four, that carbon is the principal ingredient in their composition, and hence it is, that "burned clay" must and will be acknowledged among the best and strongest manures. It is to be hoped, since the subject has been commenced, that farmers will be more and more zealous in the cause of improvement, and that experiments will be made by other farmers, as well as yourself, and that every source of improvement will be tried with the art of burning clay; that farmers may feel their importance more and more every year, and that they will leave nothing untried to make themselves happy, wealthy and wise.

Very respectfully, yours, &c.
ENNALLS MARTIN.

Dr. Joseph E. Muse.

STEAM MILLS.

Near Wilmington, Del., Feb. 4th, 1826.

J. S Skinner,

I have seen in your paper of the 3d. an inquiry from Virginia, of the practicability of uniting profitably steam power to a water mill, to make up the deficiency occasioned by drought. I am not sufficiently conversant with the charges of erecting steam engines in this country, nor the quantity of wood which an engine of 8 horses power would require per day; but I am convinced, from what I have witnessed in England, that could the inquirer obtain the most economical steam apparatus to supply his lack of water, that any thing like the regular profit he can make by the manufacture of flour would not reimburse him the expense of fixing up and working

Unless the gentleman making the inquiries has his water applied to better purposes than is done in any manufacturing establishment I have yet seen, I shall be greatly mistaken if the proper application of what he has will not furnish him with the means of doing his work without any other aid. If he will, through the medium of your paper of the 17th, or by the post if he prefers it, return me an answer to the following queries, I can give him a tolerably correct idea of what improvement his present establishment is susceptible.

1st. What is the fall, in feet, of water by which his wheel is worked?

2d. The height and width of the water wheel, and the depth of the shrouding, and if it is an overshot?

3d. The number of revolutions the water-wheel makes in a minute, when the stones are driven at their full working speed? If the number of revolutions are counted for five successive minutes, they will be ascertained the more correctly.

4th. The number of hours which he can work one pair of stones in 24, in ordinary dry seasons?

5th. Of how many acres does his dam, or reservoir consist?

I wish he would name the distance of his residence from Washington city.

For more than 30 years I have availed myself of gaining a correct knowledge of the proper application of water for moving machinery; and last year sent an essay on the subject to the Franklin Institute, in Philadelphia, of which honourable mention was made at their annual exhibition in October last.

I remain, yours, truly,
W. PARKIN, *Engineer.*

HORTICULTURE.

From the Westminster Review—London.

HISTORY OF ANCIENT AND MODERN WINES.

By Alexander Henderson, M. D.

(Continued from page 366.)

The third chapter treats of the wine vessels and wine cellars of the ancients. Skins of animals, rendered impervious by oil or resinous gums, were the most ancient receptacles for wine after it was taken from the vat. To these there are frequent allusions in Homer, the Scriptures, &c. Then vessels of clay with a coating of pitch were introduced; where wood abounded, wine casks were of that material; but, in general, the Greek and Romans used earthenware, the smaller made on the wheel, the larger formed on the ground in stoves; these were bound with hoops. Dr. Henderson next elucidates the measures of capacity of the ancients as compared with those of the moderns. Athens was celebrated for their manufacture, "whence the representation of an amphora upon certain of the attic coins."—[p. 49.] We may point out to him a curious passage in Theophrastus, from which it appears that some of the wine measures at Athens in his time were made of metal, and that those who wished to cheat their slaves, or their customers, indented the bottom so as to diminish the capacity The annotator on this passage justly remarks, that the vessels must have been made of tin or some other yielding metal, otherwise the trick could not have been played; and adds, "Simile artificium oinopolis nostris in usu esse, etiam nos hodie aliquoties cum nostro damno sentimus."*

The casks that contained the stronger wines were generally ranged along the wine cellar, sunk in sand; it is probable the piston was occasionally resorted to for the purpose of emptying the larger tuns; the smaller were tilted on one side, as appears from several passages in the classics.

On the wine cellars of the ancients Dr. Henderson is very full and satisfactory; but here also we could have wished that the Greek authors had been more consulted, if it had merely been to illustrate or contrast their modes with those of the Romans. That a cool part of their houses was preferred for keeping their wine in, appears from the instructions given by Xenophon in his Œconomics, [cap 9;] in this they agreed with the Romans. That wine was kept in cellars, or rather in caves under ground, is proved by a passage in Xenophon's Anabasis, and more particularly by the scoliast on the Ecclesiae of Aristophanes. The former in his retreat arrived at a rich plain, where they found such abundance of wine that the inhabitants kept it in cisterns lined with plaster λακκοις κονιατοις. This word λακκοις occurs in the play of Aristophanes alluded to [v. 154.] and on it the scoliast remarks, that it was customary for the Greeks and other nations to keep their wine and oil in caves or cisterns dug in the ground. Oil is occasionally kept by the Zantiotes in similar receptacles.†

Before the amphoræ containing the stronger wines were deposited in the *fumarium*, for the purpose of bringing them to an early maturity, a label was put on them indicating the vintage and the name of the contemporary consuls; to this there is frequent allusions in the classics, as those who were fond of good old wine were very particular in examining the *nota* or label; frequent impositions, as might, however, have been expected, were practised.

The mode of applying the *fumarium* to the mellowing of wines—borrowed from the Asiatics—is particularly and clearly described. Where the wine was of a strength and quality adapted to this practice, its effects were beneficial; but it was often used to force inferior wines. The inspissated wines of the ancients, Dr. Henderson seems to think, were solely produced by the *fumarium.* We are, however, rather disposed to coincide with De Pauw in his opinion, that in the earliest ages of wine-making in Greece, nearly all the wine was inspissated. He says, in the time of the poet Alcman, only one small canton of all Laconia produced wines not condensed by smoke or fire; and Aristotle, as quoted both by Dr. Henderson and De Pauw, seems to warrant this conclusion. Indeed, if inspissated wines were an after-mode of manufacture, it is not easy to find any good reason why the ancients erected statues to the person who first taught them to mix water with wine.‡ The produce of the preceding vintage was first tasted at a feast in honour of Bacchus in the month of May, when the westerly winds had generally set in; this feast was called πιθοιγια, or rather the first day of the feast, for it lasted three days. It seems to have been celebrated much in the same manner as St. Martin's day was in this country formerly, and is still in Germany, &c., when the ale barrels are first tapped, with drinking, mirth, and song.§ We have already mentioned one ancient trick as exactly resembling a modern one. Dr. Henderson at the conclusion of this chapter brings additional proof that there is nothing new, whether good or bad, under the sun. "In order to allure customers, various tricks appear to have been practised by the ancient wine dealers;

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* Theophrast. Charact. cap. 11, p. 65. Edit. Simpson. Oxon. 1738.

† Oil is kept in wells many fathoms deep in the rocks in Zante. Teonge's Diary, p. 70

‡ De Pauw on the Greeks, i. 137. Mr. Buckingham was treated at Adjeloon with wine cakes, which, he supposes resemble the inspissated wine of the ancients. —*Travels among the Arab Tribes, p.* 137.

§ The ballad, entitled Martilmasse Day, sung, in old times, in England, may be seen in Forster's Perennial Calendar, p. 627. A curious, but not very delicate, rythmus in Latin, in praise of wine, sung in Germany on the same day, probably in the monasteries of the sixteenth century, is inserted in that most strange treatise, De Generibus Ebriosorum.

some for instance put the new vintage into a cask that had been seasoned with an old and highly flavoured wine; others placed cheese and nuts in the cellar, that those who entered might be tempted to eat, and thus have their palates blunted before they tasted the wine."—p. 59.

The fourth chapter treats of the varieties and general qualities of the ancient wines. It is very evident that, unless these qualities can be assimilated to those of modern wines, little real and definite information can be given on the principal and most important subject of this chapter; and whoever has endeavoured to give to another a clear and precise notion of the taste or flavour of any thing, must be aware of the numerous and great difficulties which Dr. Henderson had to encounter in this branch of his inquiry. He justly remarks, "it is often no easy matter to determine with precision the characters of modern wines; of course it must be a still more difficult undertaking to describe those of ancient times. But as the terms by which their various flavours and other sensible properties are characterized have been long sanctioned and confirmed by modern use; and as the processes employed in the preparation of them are now thoroughly understood, we may, in many instances, ascertain the respective degrees in which particular qualities would be imparted, and sometimes even discover to which of our present growths certain wines of the ancients bore the greatest resemblance."—p. 65.

Sweetness was an almost indispensable quality in ancient wines. This Dr. Henderson proves beyond a doubt; perhaps, however, a passage in Martial is stronger on this point than any other passage in the classics. He compares the nectar of the Gods to Falernian, mixed with the honey of Attica, [Lib. xiii ep. 108.] For these sweet wines the Romans were indebted to foreign countries; those of Italian growth were generally dry and rough, and required age or the *fumarium* to mellow them. There were, thus, three classes of wines among the ancients, sweet, dry, and an intermediate order, which was both sweet and dry, or sweetish. The Greek wines were principally luscious, like Cyprus or Constantia; the Pramnian and Corinthian were dry, and required to be kept a number of years to soften their roughness and astringency; the stronger wines were generally high coloured; those from white grapes of a yellow hue: none of these were sweet. Their wines were designated from the place of growth; or, in the case of a peculiarly fine vintage, from the contemporary consul. Five years were deemed requisite to mellow the more generous; sometimes a much longer period Sometimes wine did not improve till it had been kept twenty years; after that it improved rapidly. Foreign wines attained a moderate age in six or seven years; and were much benefitted by a sea voyage, if of a quality to bear it.

The ordinary wines of Italy were very cheap, though their exact price cannot accurately be determined; it seems to have varied from about one penny to four pence the gallon. The inferior kind of Grecian wine seems to have cost from 1*l.* to 2*l.* a hogshead; the better sort 7*l.* or 8*l.*; and Pliny mentions that this sum had been given for an amphora of the best Greek wine, when in its most perfect state. In A. D. 472, during the reign of Theodoric, it is mentioned as a proof of the abundance of the vintage, that wine was sold at less than three farthings a gallon.*

We are rather disposed to agree with Grævius, in opposition to Dr Henderson, that *acetum* was a kind of wine, or rather, as it is expressly called by Macrobius, *culpatum vinum*, mismanaged wine.—That it was, however, made purposely is undoubted; and Egypt seems to have been celebrated for the manufacture of it of excellent quality, so that Martial preferred it as vinegar to the wine from which it was made.* Vinegar was the drink not only of the Roman soldiers, but also of the slaves and poorer people.† Dr. Henderson is inclined to believe that the *posca* of the Rômans could not have been a mere mixture of vinegar and water, since this would not have formed a distinct trade, and we are informed that the favourite freedman of Vitellius, after he quitted that emperor, became a vender of *posca;* a passage in the Miles Glorios. of Plautus, [Act iii. sc. 2,] in which the slaves are represented as having got access to the casks of wine and *posca,* seems to warrant this supposition, as it hardly can be supposed they would have stolen mere vinegar and water, their ordinary beverage.

(*To be continued.*)

GRAFTED FRUIT.

We are sorry to see an erroneous opinion prevailing among our horticulturists, that the best varieties of our grafted fruit are on the decay. It is believed that the health and duration of the grafts, depend upon the age and health of the parent stock. This theory originated in England a few years since, and was first announced by Thomas Andros Knight, Esq. For some years past, says Mr. Henry Phillips, it has been stated by several ingenious writers, that many of our best varieties of apples could no longer be cultivated with success; that by length of time they have become degenerated and worn out. Mr. Knight, the President of the Horticultural Society, seems to have been the first who gave birth to this idea. He says, in his *Pomona Herefordiensis,* that those apples which have been long cultivated are on the decay. The Red-streak and the Golden Pippin can no longer be propagated with advantage. The fruit, like the parent tree, is affected by the debilitated old age of the variety." Again he says, in his Treatise on the Culture of the Apple and Pear, p. 6, "The Moil, and its successful rival the Red-streak, with the Must and Golden Pippin, are in the last stage of decay; and the Stire and Fox-whelp are hastening rapidly after them." "It is much to be regretted," says Speechly, "that this apparently visionary notion of the extinction of certain kinds of apples should have been promulgated by authors of respectability, since the mistake will, for a time at least, be productive of certain ill consequences."

The author of the work we are quoting from, says, "Having observed among the apples in Covent Garden market, in 1819, a great quantity of the real golden pippins in a perfect state, the author was induced to make particular inquiries respecting this fruit; and has received satisfactory accounts from all quarters, that these trees are fast recovering from a disease, or *canker,* which appears to have been brought on by a succession of unpropitious seasons, but that the summer of 1818 and the following year have greatly improved them." The author continued his inquiries still further, and waited on some gentlemen who are well known in all parts of the world, for their practical knowledge in the cultivation of apples, and they were uniformly of opinion, that the "apparent decay of some trees was owing to the unfavourable springs we have had for several years."

This decay of the apple in England, was similar to the decay of our peach trees in Massachusetts a few years ago. It will be recollected that about 1814 we had a succession of wet and cold seasons, which seemed to complete the destruction of many of our peach trees. The succession of warm seasons, and particularly the last, restored that valuable tree to us in all its strength and vigour.

The theory of Mr. Knight, announced as it was from such high authority, created an alarm among horticulturists, and this opinion has got hold among us. We know that some of our most enlightened farmers labour under this erroneous notion, which is actually influencing their practice to the neglect of the good old varieties of apples, and a laborious search after new varieties equally good, to supply the place of the old fruit.

From our own observation, we are persuaded that the theory of Mr. Knight is entirely unfounded. We can show some very thriving trees, of the *old fashioned Pearmain,* in a bearing state. The name of this fruit has been known in Salem above a hundred years. It was an old and well known fruit a century ago, and the modern trees have not decayed with the parent tree, but are as flourishing as we could desire, and promise to live an hundred years longer.

We can show also a number of trees of the Ribston pippin, in a most flourishing condition, and bearing every year; and yet, according to the theory, these trees ought to have been on the decay, by *sympathy* with the parent tree. "The Ribston pippin is a native of Ribston Park, Yorkshire. Hargrave, in his history of Knaresborough, p. 216, says 'This place is remarkable for the produce of a delicious apple, called the Ribston pippin. The original tree was raised from a pippin brought from France, from which tree such numbers have been propagated, that they are now to be met with in almost every orchard in this and many other countries.' The old tree is yet standing, and in the year 1787 produced six bushels of apples." Mr. Knight would have us believe, and if his theory be true, we must believe, that when this old tree decays, every other tree throughout other countries will decay also.

We are not confined in our observations to the apple alone. In noticing the history of the China, or Sweet Orange tree, and its introduction into Europe, Mr. Phillips remarks, "The China, or Sweet Orange, with which this country [England] is so amply supplied, and at such moderate prices, that *all classes* of society enjoy them as perfectly as if they had been indigenous to the climate, were not known to the ancient Europeans. They were first brought into Europe by Juan de Castro, a celebrated Portuguese warrior, who made them a present to the Condi Mellor, the king of Portugal's prime minister, who was only able to raise one plant from a great number that were brought to Europe. This tree, which was planted in 1548, is the parent tree from which all the European orange trees of this sort were produced, and is said to be now alive at Lisbon, in the garden of Count St. Laurent. It would be a most deplorable fact, if all the china orange trees throughout Europe depended on the decay of this tree. We have seen the beautiful groves of orange trees in the King's and Queen's gardens at Lisbon, but they were certainly not in decay, but on the contrary, in a high state of vigor and production.

We have just eaten a pear from the old Endicott tree. This tree is said to have been imported from England by the governor nearly 200 years ago. It is now in a state of decay. About 8 years since we procured a scion from that tree, which grew vigorously. Last year we gathered four bushels of pears from it, and this year about half that quantity. There are no signs of decay to be seen on the graft; but so far from any such appearance, the whole tree, which is now large, affords a striking example of health, and strength, and vigor.

We could multiply instances to prove the fact, that the continuation of a tree by grafting does not depend upon the health or decay of the parent stock. We have before us the works of Quintiney, printed in 1719, John Lawrence, 1716, and Cox; and could select many more facts to prove the fallacy of Knight's theory. We refer to the winter *Bon Cretien—"this is justly preferred before all others, being of great antiquity."* Now, upon looking at Cox, we shall find that our pear of the same name is precisely the same fruit. But our trees are not in decay, which should certainly be the case, if Knight's theory be true.

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* Hill's Essays on Ancient Greece, p. 26. Anderson's History of Commerce, i. 220.

* Macrob. Satur. lib. vii. c. 6. Martial, lib. xiii. ep. 122 Athenæus edit. Casaub. vol. ii. p. 87.

† Theocr. Idyll. x. v. 13. *Spartian, Niger.* apud Hist. August. p. 380, and Casaub. in loc.

We presume no one will deny that the propagation of trees and shrubs from cuttings, is in effect the same as their propagation by scions inserted in the body of another stock. The mulberry tree is propagated in this manner, so are figs, and currants, and gooseberries; and yet the new plants are not dependent on the tree or shrub from which they were taken. They start off into a new system of being, and thrive or decay, according to the favourable or unfavourable circumstances in which they are placed. [*Salem Register.*

DIMINISHED CONSUMPTION OF WINES.

From a statement made to the Senate, by the Treasury Department; in answer to a call for a return of the aggregate quantity of each description of Wines imported annually into the United States since 1800, with the duties to which they were subject; we have drawn the following facts, showing a most extraordinary diminution in the consumption of wines, while our population and prosperity have been going on so rapidly increasing in ratio.

The tables of this document present the regular annual importation of wines: beginning the series of years with 1801 and ending with 1824. In order to ascertain the average consumption for a given time, we have taken the first eight years from 1801 to 1808, both inclusive; and the last eight, from 1816 to 1824, both inclusive. The results follow: The duties payable during the *same periods* are also given:

Malmsey, Madeira and London particular—
Annual average of consumption

from 1801 to 1808	257,700	duty 50 cts.
Do. 1816 to 1824	144,162	100
Decrease,	113,516 galls.	

Burgundy, Champaigne, Rhenish, and Tokay—

An av. cons. from 1801 to 1808	4,263	
Do. do. 1816 to 1824	6,363	
Increase,	2,100	

Sherry and St. Lucar—

An. av. cons. from 1801 to 1818	346,331	duty 40 cts.
Do. do. 1816 to 1824	29,777	60 cts.
Decrease,	316,554 galls.	

Claret and other wines not enumerated when imported in bottles—

An. av. cons from 1801 to 1808	144,887	duty 35 cts
Do. do. 1816 to 1824	70,024	30 a 70
Decrease,	74,863	

Lisbon, Oporto, and other Portugal wines—

An av. cons from 1801 to 1808	331,424	duty 30 cts.
Do. do. 1816 to 1824	193,043	50 cts.
Decrease,	131,381	

Teneriffe, Fayal, Malaga, and Western Island wines—

An. av. cons. from 1801 to 1808	540,121	duty 28 cts.
Do. do. 1816 to 1824	282,931	40 cts
Decrease,	276,190	

All other wines, when imported otherwise than in bottles or cask—

An av cons from 1801 to 1808	2,143,064	duty 23 cts
Do. do. 1816 to 1824	1,460,501	25 a 150.
Decrease,	952,563	

It will be seen by the above comparative statement, that with one single exception, the average consumption of all sorts of wines, has diminished nearly one half in the last eight years, as contrasted with that during the first eight years of the century. Among the causes of this diminution may perhaps be enumerated; increased duties, more economy in expenditures of luxury, and above all, an enlarged, fatally enlarged consumption of ardent spirits.

LADIES' DEPARTMENT.

LILIES—LILIUM.

LILIACEÆ.—HEXANDRIA MONOGYNIA.

French, le lis, lys.—*Italian*, giglio: in the Brescian, zei.

Although we usually associate the idea of extreme whiteness with the lily, so that it is common to express a pure white by comparison with this flower, as with snow, and as white as a lily is an old and common proverb, yet lilies are of almost every variety of colour: perhaps there is no other flower that varies so much in this respect.

"The common white lily," says Mr. Martyn, "has been cultivated in England time immemorial." The stem is usually about three feet high. The flowers are brilliantly white, and glossy on the inside. It is from the East; and in Japan the blossom is said to be nearly a span in length. This lily flowers in June and July. The roots, which are mucilaginous, are sometimes boiled in milk or water, and employed in emollient poultices; but they have not much reputation. An oil for the same purpose was also prepared by infusing the roots in olive oil.

There are several varieties of the white lily: as, that with the flowers striped or blotched with purple; that with the leaves striped or edged with yellow; one with double, and one with pendulous flowers. The double flowers are less fragrant than the single; and the common kind is generally held in higher estimation than any of the others.

This lily may easily be increased by offsets, which the bulbs furnish in great plenty. They should be taken off every second year. The best time to remove it is about the end of August, soon after the stalks decay. It will thrive in almost any soil or situation, is very hardy, and not liable to injury by frost. Few plants are more easily increased or preserved than the lily, so remarkable for the beauty and fragrance of its flowers.

The bulbs, when removed, may be treated as other bulbs, but the sooner these are replanted the better, as they do not keep so well out of the ground as many others.

This lily is considered as an emblem of purity and elegance; and

> "The lady lily, looking gently down,"

is scarcely less a favourite with the poets, than the rose itself:

> "The lily, of all children of the spring
> The palest—fairest too where fair ones are."
>
> *Barry Cornwall's Flood of Thessaly.*

> "Thus passeth yere by yere, and day by day,
> Till it felle ones in a morwe of May,
> That Emelie, that fayrer was to sene
> Than is the lilie upon his stalke greene,
> And fresher than the May with floures newe,
> For with the rose color strof hire hewe;
> (I n'ot which was the finer of them two)
> Er it was day, as she was wont to do,
> She was arisen and all redy dight;
> For May will have no slogardie a-night."
>
> CHAUCER.

> ———"In virgin beauty blows
> The tender lily languishingly sweet."
>
> ARMSTRONG.

> "Hevinlie lyllys with lokkerand toppis quhyte,
> Opynnit and schew thare crestis redemyte."
>
> GAWIN DOUGLAS.

> "Queen of the field, in milk-white mantle drest,
> The lovely lily waved her curling crest."
>
> MODERNISED BY FAWKES.

Catesby's lily was named in honour of Mr. Catesby, who first found it in South Carolina. It is one of the smallest of the lilies cultivated in this country; the whole plant, when in bloom, being little more than a foot high. The flower is variously shaded with red, orange and lemon colours, and has no scent. It blows in July and August. This lily does not produce offsets very fast. It must be carefully sheltered from frost, and be kept moderately moist.

The Orange lily has a large and brilliant flower, of a glowing flame-colour, figured and dotted with black and fiery red. There are several varieties of this species: one of which, called the Bulb-bearing Fiery lily, puts out bulbs from the axils of the stalks; which, when the stalks decay, being taken off, and planted, will produce new plants.

The Orange lily will thrive in any soil or situation, and is readily increased by offsets. The bulbs should be removed every second year, and planted again before Christmas. It may stand abroad, and should be kept moderately moist.

Of the Martagon lilies there are several species, and many varieties of each. These are not calculated for pots, but cannot be passed over without notice, since it is one of these lilies called the Chalcedonian, or Scarlet Martagon, which has been determined to be the poetical hyacinth. The Red, and Yellow Martagons are commonly known by the name of Turk's-cap lilies.

THE RURAL MAID.

What happiness the rural maid attends,
In cheerful labour while each day she spends!
She gratefully receives what Heaven has sent,
And, rich in poverty, enjoys content.
(Such happiness, and such unblemish'd fame,
Ne'er glad the bosom of the courtly dame:)
She never feels the spleen's imagin'd pains,
Nor melancholy stagnates in her veins;
She never loses life in thoughtless ease,
Nor on the velvet couch invites disease;
Her home spun dress in simple neatness lies,
And for no glaring equipage she sighs:
Her reputation, which is all her boast,
In a malicious visit ne'er was lost;
No midnight masquerade her beauty wears,
And health, no paint, the fading bloom repairs.
If love's soft passion in her bosom reign,
An equal passion warms her happy swain;
No homebred jars her quiet state control,
Nor watchful jealousy torments her soul;
With secret joy she sees her little race
Hang on her breast, and her small cottage grace;
The fleecy ball their busy fingers cull,
Or from the spindle draw the lengthening wool:
Thus flow her hours with constant peace of mind,
'Till age the latest thread of life unwind. GAY.

SPORTING OLIO.

ON DOG BREAKING.

(Continued from American Farmer, page 359.)

In a short period you will perceive him draw more cautiously upon the scent, on approaching his object, he will pause even at a lark, but when a partridge happens to be before him, his pause or stop will be more steady, and his manner altogether much more earnest; and the difference of the object will be very clearly manifested in his countenance.* He should now be taken out with an old steady dog, and whenever he comes to a point, the word *toho!* should be used, and afterwards the whip, if the word prove unavailing. Whenever he sets, approach him, at your regular pace, but seem not in a hurry, (as, if you run, he will be very apt to do the same,) and stand by him for a few seconds; if the birds do not rise, he should be allowed to advance, by saying, *hold up!* be mindful, however, that he does not advance too rapidly, and in order to effect this make use of words expressive of caution, as *take heed!* When the old dog points, the young one should be taught to *back*, which may be accomplished in the following manner:—As soon as the old dog settles to a point, supposing the young one happens to be at a distance, he must be observed, as the moment he perceives the point, he would, if left to himself, rush eagerly up: however, he must be prevented from so doing, by calling out *toho!* at the same time, holding up your hand.—If he obey not by gentle means, recourse must be had to the whip By these means he will, most likely, soon become very steady; for dog-breaking, if attended to, at a proper period, and in a proper manner, does not give half the trouble that is generally supposed. Holding up the hand is the signal for the dog to *back;* and, in a little time, whenever he sees it, he will immediately stop, though he may be at the other end of the field, or at a considerable distance.

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* If, contrary to expectation, he should manifest no disposition to pause or stop, after having been taken into the field half a dozen times, every time he springs

At the same time, he should be taught to quarter his ground in a proper manner, as well as not to break fence In beating a field, care should be taken to give him the wind; or, at least, he should never be suffered to run directly with the wind: if it blow in his face, so much the better, but a dog will hunt very well with a side wind. The dog should cross about twenty yards before the shooter, and if, after running down the field, he should not cross up again at about the distance just mentioned, he should be called to or whistled, and a wave of the hand should direct him across the field; unless indeed he catch scent, when he should be suffered, of course, to follow it. In case of attempting to *break fence*, he should be instantly whistled to or called by name, in an angry tone, using at the same time the words *'ware fence!* This will, in all probability, soon produce the requisite obedience; but should he refuse to obey the whistle or the call, the *whip* must produce what more gentle means are unable to effect. If he refuses to pay attention to the whistle, he should receive a few stripes, (more or less, according to the disposition of the animal,) the whistle occasionally used during the operation; and so corrected, should he not return implicit obedience when called to. Thus, he will soon become pleasingly tractable.

However, as some young dogs are alarmed at the report of the fowling-piece, it will not be amiss, on the game rising, after having been properly set, to fire a pistol, which will render him familiar to the sound. If his terror should increase on the firing of the pistol, so as to frighten him from the field, or induce him to run home, the experiment should be entirely abandoned till the shooting season, when he should be coupled to another dog, or otherwise prevented from running away till a few birds are killed and shown to him.—If a bird be winged, he should be induced to foot it, and even suffered to mouth it, which is by far the best method of reconciling him to the discharge of the fowling-piece.

We will suppose that the dog is already steady at partridges; yet if he happens to approach a hare, he will scarcely fail to rush at her—at all events, he will chase when she rises. In this case, he must be brought back to the place whence he run, and made to crouch as before described, using the words, *'ware hare!* or *'ware chase!*

Hitherto, I have supposed that the dog-breaker has been engaged with a mild, good, tempered animal, which will be easily rendered tractable by the means just described; there are, however, dogs of a very different description, which require an excess of flogging, aided by other coercive measures, in order to enforce that indispensable degree of subordination, without which, shooting, so delightful with well-trained pointers, is rendered irksome and vexatious.

If repeated severe flogging fail to accomplish the object of the sportsman, recourse must be had to the *trash cord*, or rather *drag-cord*. This is a cord something like a clock-line, about twelve or fourteen yards in length, to be fastened round the dog's neck, if in the fields; on the moors the dog will run with twenty yards, while twelve or fourteen will soon tire him in enclosed grounds:* the greater the length of the cord, however, that can be used with propriety, the better: the cord may be shortened as the dog becomes fatigued. By the help of this cord you will be enabled to stop him whenever you please. However, we will suppose that he makes a point: should he attempt to run in, you must check him as smartly as possible, making use of the word *toho!* and the whip also if you think proper. This cord will be very useful should the dog not come in when he is called, &c. If, after a little practice with the drag-cord, the dog perseveres in springing his game, or continues otherwise refractory, the *spiked collar* must be used. The *spiked collar* is merely a leathern strap, through which are inserted a dozen or more small nails, the points of which should extend half an inch beyond the surface of the inside. On the outside a piece of leather must be sewed over the heads of the nails, to prevent their starting back when the dog presses upon their points This is to be buckled round the oog's neck, the points of the nails inwards, and the drag cord attached to it.—Thus, when it becomes necessary to check him on his attempting to run in, or behaving otherwise unruly, the admonition, or rather correction, will be much more impressive; in a little time, his neck will be very sore; and he must be contumacious beyond measure if this mode of punishment does not produce the desired effect.

The most difficult part of dog-breaking is, perhaps, the reducing of the animal to perfect obedience in respect to hares. In the first instance, a young dog will eagerly pursue larks or thrushes, or in fact any of the feathered tribe which he happens to meet with; the partridge being a larger object, and making considerable noise when taking wing, will be pursued by him with much more ardour; a similar remark will equally apply to the pheasant, which he will still more eagerly pursue: but very soon discovering the attempt to be hopeless, he will shorten the distance of his pursuit, and ultimately abandon the chase altogether. Not so, however, with the hare; for perceiving that it does not leave the ground, but runs like himself, he will not very easily relinquish the hope of overtaking her, but will rush forward with ungovernable ardour, and, even when lost sight of, will continue to follow the chase by the nose. But there are few dogs which may not be rendered steady in respect to hares by the means which we have pointed out; and that where hares are numerous much sooner, of course, than where they are seldom met with. There is one effectual mode of reducing a dog to obedience in this respect, should the whip, the drag-cord, and the spiked collar fail of the desired effect. For this purpose a living hare should be procured, to the neck of which a cord should be fastened: to the other end of the cord (which may be six or seven yards in length) should be attached a wire, which wire should be thrust through the snout or cartilaginous part of the dog's nose. The hare will, of course, spring forward at the sight of the dog, which will not fail to cause the most acute pain to the latter; the whip should be applied at the same time, accompanied with the words, *'ware hare!** This may be regarded, perhaps, as the excess of severity, and should never be resorted to but when all milder means have been repeatedly tried in vain. To prevent an obstinate dog chasing hares, I have sometimes seen the fowling-piece used as a remedy. It may be regarded as a desperate one, which, though it will generally have the desired effect, should be used with the utmost circumspection. If a dog is to be shot at, care should be taken that he is at a sufficient distance, as well as to hit him about the rump, otherwise you run great risk of *killing* him.

In the earlier part of these remarks, I have mentioned mild-tempered dogs. It will be requisite here to observe, that well-bred dogs are occasionally met with so very shy as to require encouragement rather than correction: dogs of this description may sometimes prove excellent; but I must confess I do not like to see a *shy dog*. Animals of this sort should never be taken with dogs that need much checking or flogging, as the very sight of the whip alarms them to such a degree that they will not stir from behind you Nothing is more difficult than to manage very shy dogs: they must be encouraged to hunt; and if they commit an error, the means of correction are difficult, and sometimes impossible: the least severity will most likely make them *blink*† their game; and when once this habit is contracted, it will require more than ordinary pains to eradicate it. Many young dogs will be much alarmed at the report of a gun; and yet, when reconciled to it, prove excellent. Few shy dogs are ever very prizeable; I never saw a good one.

As I have spoken of the various methods to be employed to render a dog steady at the point, to range, and also to *back*, I must observe, in this place, that a dog should never be suffered to *break fence;* or, in other words, to leave the field till you are ready to accompany him, as much mischief may ensue from his being suffered to ramble out of sight, or to a great distance. On his attempting to break fence, the whistle should be used, the dog should be called by his name, (in an angry tone,) followed by the words, *'ware fence!*—the whip, &c. to be resurted to, as in other cases, if necessary, to procure obedience.

Generally speaking, as little noise as possible should be made. The voice or the whistle should never be used, but when absolutely demanded: the dog will thus hunt steadier; and if you accustom him to the motion of your hand, he will regularly look for the signal whenever he is at a loss.

It is thought by some, that dogs *broke on the grouse mountains* are superior as to *ranging:* this is doubtful, if not a mistaken notion altogether. In this respect, much will depend upon the animal himself.

Young dogs in general hunt with their noses closer to the ground than old ones, and are apt to puzzle on the scent a considerable time after the game has left the spot A little practice will, however, most likely remedy these defects: if not, recourse must be had to the *muzzle peg*, an instrument very well known amongst sportsmen, but which I will,

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the game, he must be brought back to the spot whence it rose, and compelled to crouch; the word *toho!* must be angrily spoken, and the whip used, if, after repeated cautions, he should pay no attention.

* On the moors, the cord is drawn over the top of the heath in a great measure, and therefore runs light; in stubble-fields and rough grounds many obstacles render the dragging of the cord very hard labour.

* On all occasions of correction, the requisite word should uniformly accompany the punishment.

† *Blinking* is when a dog finds game, and, on being spoken to, draws off, and runs behind you, and frequently without being spoken to.

nevertheless, describe. The *muzzle peg* is merely a piece of wood hollowed out and formed at one end so as to fit or receive the under jaw of the dog. From the dog's nose to the other end, projecting about nine inches, it is merely a round stick rather thicker than a man's thumb; though some persons, instead of one of these round projecting sticks, prefer two, forming an angle with the dog's nose. At the upper end of that part which is placed under the dog's nether jaw, two longitudinal holes or slits are made, through which a strap is inserted, which is buckled behind the animal's ears; while the other end of the thick part of the muzzle-peg, or that which comes under the canine teeth, or fangs, is perforated with two holes, through which a leather thong is drawn, and tied immediately behind the fangs just mentioned. With this instrument, so fastened, the dog, may be hunted without the smallest injury. At the first putting on, however, he will use every effort to rid himself of so disagreeable a companion, nor will he hunt till he has satisfied himself of the inefficacy of his utmost exertions to get free from this unpleasant restraint. At length, he will become familiar with the instrument, and run with it as unconcernedly as possible; and it will make him carry his head well up, as well as prevent his chopping young hares, or mouthing in any way. A dog that *rakes*, (that is, runs with his nose close to the ground,) and follows his game by the track, will generally spring it. Whenever, therefore, a young dog is seen to follow the track of a partridge, (down wind in particular,) he should be called to, in an angry tone, *hold up!* he will then become uneasy, going first on one side and then on the other till the wind brings him the scent. If, after a short period, he should persevere in keeping his nose to the ground, and in following the track, recourse must be had to the instrument which I have just described.

Grouse, partridges, or any kind of game, lie much better to a dog that winds them, than to one which approaches by the track. The dog that winds the scent approaches the game by degrees, and that more or less as he finds it wild or otherwise, which he is enabled to discover by the scent which is emitted; and though grouse or partridges see him hunt round them, they will be much less alarmed than when they observe him following their track, and suffer his near approach; or, in other words, *lie well.* The reason seems evident:—The dog, I apprehend, is seen by the birds (generally speaking) as soon as he enters the field; or, at all events, at a very considerable distance; and the moment they perceive him approach by the track, they take the alarm, supposing themselves discovered, or, at least, very likely to be discovered; but watching, as they assuredly do, the motions of the dog, and observing that he does not follow the track along which they have run, they conceive themselves undiscovered, and thus allow the dog to come to a steady point. It may, moreover, be further remarked, that a dog which carries his head high will always find the most game, to say nothing of finding it in a handsome style. (*To be continued.*)

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 10, 1826.

☞BOOKS MISSING—Amongst other valued, if not valuable books, the Editor misses from his library 5th, 6th and 7th volumes of the Annals of Sporting—and one volume of Volney's "Modern Researches in Ancient History." Any information respecting them will be thankfully acknowledged.

☞We would respectfully inform the ladies that we have received some anonymous intimations that wives are already well enough instructed in the duties of husbands, and some of them not slow to pronounce original, not to say sharp and very intelligible, lectures on the subject. That, therefore, it was a work of supererogation to fill half a dozen columns of the American Farmer with "Hints to Husbands," which they say their wives have (as we think quite judiciously,) requested them to "read out," by way of amusement on rainy days; instead of letting them be off, leaving wife and all the alluring pleasures of the domestic fireside—

> "To seek good-humoured tavern chums
> And play at cards for monstrous sums,
> Or with the merry fellows quaff
> And laugh aloud with them that laugh."

To pacify these grumbletonians, we have promised, soon after Valentine's day, to publish some "WHISPERS TO WIVES," which they will be expected to read in their turn.

☞An Ohio subscriber asks "whether the prices of the fine yellow Tobacco will be seriously reduced by the annual production, in Ohio, of 50, or 100,000 HOGSHEADS!!!

☞If any of our readers can supply a small quantity of Spanish Tobacco seed, the growth of Cuba, it will be acceptable, as it has been asked for by those whom we should be glad to oblige.

☞MEETING OF THE TRUSTEES OF THE MARYLAND AGRICULTURAL SOCIETY.—The next is appointed to be held on Thursday next, the 16th of this month, at 1 P. M., at the residence of J. B. Morris, Esq.

INQUIRIES RESPECTING ERYSIPELAS.

Banks of the Delaware, 2 miles from
Holmesburg, Pa., Feb. 3, 1826.

DEAR SIR,—Please have the goodness through your widely circulated and very useful paper, to request the communication from some one of your numerous subscribers, of a cure for the Erysipelas, or what is commonly called St. Anthony's Fire, and particularly the Itching that attends this terrible disorder, with which the writer of this, has been sorely afflicted for the last seven years.

I have the honour to remain,
very respectfully, your friend,
and humble servant,
GEORGE W. MORGAN.

JOHN S. SKINNER, Esq.

MERINO SHEEP.

The subscriber has for sale, at his farm in Fairfax county, Virginia, (near Alexandria, D. C.) twenty *genuine*, and very *superior Merino Ram Lambs*, which will be fit to take from the ewes in May or June next.

GEORGE W. MASON.

January 31st, 1826.

CONTENTS OF THIS NUMBER.

On Breeding Sheep, by John Hare Powel, Esq.—The Art of Improving the Breeds of Domestic Animals, by the right hon. Sir John S. Sebright, M. P.—Letter from Dr. Enoalls Martin, in answer to Dr. Joseph E. Muse, on the preparation and use of Burned Clay as a manure—Answer to an Inquiry on the application of steam-power to water mills—History of Ancient and Modern Wines, by Alexander Henderson, M. D., continued——On Grafted Fruit, opinion that the best fruits are deteriorating, controverted—Diminished Consumption of Wines in the United States, from the Reports from the Treasury Department—On the History and Culture of the Lily-*Lilium*—*Poetry*, the Rural Maid, by *Gay*—On Dog-breaking, continued—Infallible cure for Chopped Lips—Inquiries respecting Erysipelas—Editorial—Advertisement.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50			
BACON, and Hams, . .	lb.	7	10		
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java, ...	—	18		22	25
Havana, ...	—	15	17	18	20
COTTON, Louisiana, &c.	—	16	18		
Georgia Upland, . . .	—	14	14½		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½		14	16
Dipt, ...	—	10	11	11	12½
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90	95		
FLOUR, Superfine, city,	bbl.	4 50	4 62	5 50	6 25
Fine, ...	—	4	4 25		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	55	60	62	65
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	75	92		
do. Red, ...	—	90			
do. White Flint, . .	—	2 00			
Rye, ...	—	55	58		
Barley, ...	—	90	95		
Clover Seed, Red . .	bush	4 50		5	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	—	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	40		45	
Beans, White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	30	37	50
HOGS' LARD, ...	—	9	10	12	
LEATHER, Soal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45		62	75
Havana, 1st qual. . .	—	30	31	37½	
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	2			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2 00	2 12		
OIL, Whale, common, .	gal.	30		40	50
Spermaceti, winter .	—	70		88	1 00
PORK, Baltimore Mess,	bbl	13 00			
do. Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	6 00	6 12		
RICE, fresh, ...	lb.	3	3½	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5½	7	8	12
WHISKEY, 1st proof, .	gal.	25	26	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	--	35	37	50	
SUGARS, Havana White,	c.lb.	13 50		15	16
do. Brown, . .	—	10	10 50		
Louisiana, ...	—	8 50	9 75	10	11
Loaf, ...	lb.	19	22	20	23
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	80		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	17½	18	25	
SALT, St. Ubes, ...	bush	46	48		
Liverpool Blown . .	—	53	55	75	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 30	2 00	
Lisbon, ...	—	1 15	1 25	1 50	1 75
Claret, ...	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed, but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled.	—	33	35		

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AGRICULTURE.

EXTRACT FROM THE MEMOIRS OF JOSIAH QUINCY, Jr.

January 2d, (1775.)—This evening I had about two hours conversation with Colonel Barré, and from him I learned that he was once the friend of Mr. Hutchinson, in opposition to Governor Pownall, but that he had for a long time, and especially since his last arrival in England, wholly deserted him.

Colonel Barré, while we were viewing the pictures taken from the ruins found at Herculaneum, said, "I hope you have not the books containing the draughts of those Ruins with you" I replied there was one set, I believed in the public library of our college. "Keep them there," said he, "and they may be of some service as a matter of curiosity for the speculative; but let them get abroad, and you are ruined. 'Tis taste that ruins whole kingdoms; 'tis taste that demolishes whole nations. I could not help weeping when I surveyed the ruins of Rome All the remains of Roman grandeur are of works, which were finished when Rome, and the spirit of Romans, was no more, unless I except the ruins of the Emilian Baths. Mr. Quincy, let your countrymen beware of taste in their buildings, equipage, and dress, as a deadly poison."

Colonel Barré also added, in the course of conversation, "about fifteen years ago I was through a considerable part of your country; for in the expedition against Canada, my business called me to pass by land through Pennsylvania, New Jersey, New York and Albany. When I returned again to this country, I was often speaking of America, and could not help speaking well of its climate, soil and inhabitants—for you must know, sir, America was always a favourite with me; but will you believe it, sir, yet I assure you it is true, more than two-thirds of this island, at that time, thought the Americans were all negroes."

I replied I did not in the least doubt it, for that if I was to judge by the late acts of Parliament, I should suppose that a majority of the people of Great Britain still thought so; for I found that their representatives still treated them as such. He smiled, and the conversation dropped. Col. Barré was among those who voted for the Boston port bill.

Chinese Agriculture.—Extracts from Travels of a Philosopher.

I arrive at Canton, where new objects of admiration arise; the noise, the motion, the crowd augments; the water, as well as land, being every where covered with multitudes. Astonished at the amazing appearance, I inquire into the numbers of the inhabitants of this city and suburbs; and after comparing different accounts, find that they must amount at least to eight hundred thousand souls. My surprise, however, is greatly increased, when I learn, that to the northward of Canton, about five leagues up the river, is a village named *Vachan,* which contains a million of inhabitants; and that every part of this great empire, extending about six hundred leagues from north to south, and as much from east to west, is peopled in the same proportion.

By what art can the earth produce subsistence for such numbers? Do the Chinese possess any secret art of multiplying the grain and provisions necessary for the nourishment of mankind? To solve my doubts, I traversed the fields, I introduced myself among the labourers, who are in general easy, polite and affable, with some share of learning, and knowledge of the world. I examine, and pursue them through all their operations; and observe that their secret consists simply in manuring their fields judiciously, ploughing them to a considerable depth, sowing them in the proper season, turning to advantage every inch of ground which can produce the most inconsiderable crop, and preferring to every species of culture that of grain, as by far the most important.

This system of culture, the last article excepted, appears to be the same that is recommended in all our best authors, ancient and modern, who have wrote on this subject; our common labourers are acquainted with it; but how much must our European farmers be surprised, when they are informed that the Chinese have no meadows, natural or artificial, and have not the least conception of fallowing, never allowing their lands the slightest repose.

The Chinese labourer would consider meadows, of every denomination, as lands in a state of nature: they sow their lands all with grain, and give the preference to such grounds as we generally lay out in meadows, which, lying low and being properly situated with respect to water, are consequently by far the most fertile. They affirm that a field sown with grain, will yield as much straw for the nourishment of cattle, as it would have produced of hay, besides the additional advantage of grain for the sustenance of man, of which they can spare too, in plentiful seasons, a small portion for the animal creation.

Such is the system adhered to from one extremity of the empire to the other, and confirmed by the experience of four thousand years, amongst a people, of all the nations in the world, the most attentive to their interest. That which must render this plan of agriculture the more inconceivable to Europeans, is the idea of their never allowing their lands to lie one season unlaboured. Those who for some years have endeavoured, with such public spirited zeal, to re-animate amongst us this neglected art, have considered as the first and most important object, the multiplication of artificial meadows, to supply the defect of natural ones, for the fattening of cattle; without once venturing to think of suppressing the mode of fallowing the grounds, however far they carried their system of increasing the number of artificial pastures.

This system, which appears the most plausible of any they have projected, and is received with the greatest partiality by our farmers, is, nevertheless, contradicted by the experience of the greatest and the most ancient land-labouring nation in the world, who regard the practice of meadows, and fallowing grounds, as an abuse, destructive of plenty and population, which are the only important objects of agriculture.

A Chinese labourer could not but smile, if you informed him that the earth has occasion for repose at a certain fixed period of time: he certainly would say, that we deviated greatly from the point in view, could he read our treatises, ancient and modern; our marvellous speculations on agriculture. What would he say, if he saw our lands, part of them fallow, part of them employed in useless cultures, and the remainder wretchedly laboured? What would he say, what must be his feelings, if, in travelling over our fields, he observed the extreme misery and barbarism of their wretched cultivators?

The Chinese lands, in general, are not superior to ours: you see there, as with us, some excellent grounds, others middling, the rest bad; some soils strong, others light; lands where clay, and lands where sand, gravel, and flints every where predominate.

All these grounds, even in the northern provinces, yield annually two crops, and in those towards the south often five in two years, without one single fallow season, during the many thousands of years that they have been converted to the purposes of agriculture.

The Chinese use the same manures as we do, in order to restore to their grounds those salts and juices, which an unintermitting production is perpetually consuming. They are acquainted with marl; they employ also common salt, lime, ashes, and all sorts of animal dung, but above all, that which we throw into the rivers: they make great use of urine, which is carefully preserved in every house, and sold to advantage. In a word, every thing produced by the earth is reconveyed to it with the greatest care, into whatever shape the operations of nature or art may have transformed it.

When their manures are at any time scarce, they supply the deficiency, by turning up the ground with the spade, to a great depth, which brings up to the surface of the field a new soil, enriched with the juices of that which descends in its room.

Without meadows the Chinese maintain a number of horses, buffaloes, and other animals of every species necessary for labour, for sustenance and for manure. These animals are fed, some with straw, some with roots, beans, and grain of every kind. It is true they have fewer horses, and horned cattle, in proportion, than we have, yet it is not necessary they should have more.

The whole country is cut into canals, dug by the industry of the inhabitants; extending from river to river, which divide and water this vast empire, like a garden. Travelling, transporting of goods, almost every species of carriage, is performed on these canals, with great ease and small expense: they do not even use horses to drag their boats; every thing is done by the sail or the oar, which they manage with singular dexterity, even in going up the rivers. Where any kind of labour can be performed at a moderate price by men, it is a maxim with them never to employ animals. In consequence of this, the banks of their canals are cultivated almost to the water's edge; they lose not an inch of ground: their public roads resemble our foot-paths; their canals, however, are infinitely more useful than highways: they convey fertility every where, and furnish the people great part of their subsistence in fish There is no comparison between the [illegible] which can be transported in a boat, and that which can be conveyed in any kind of land carriage; no proportion between the expense.

The Chinese are still less acquainted with the use, or rather the luxury of chariots, and equipages of every kind, which crowd the principal cities of Europe. The horses necessary for these, assembled in thousands in our capitals, consume the produce of numberless acres of our best grounds, which, if cultivated with grain, would afford subsistence for multitudes, who are dying of hunger. The Chinese wish rather to maintain men than horses.

The emperor and chief magistrates are carried through the cities by men, with safety and with dignity; their march is sedate and majestic, it threatens not with danger those who walk on foot: they travel in a kind of galleys, safer, more commodious, equally magnificent and less expensive than our land equipages.

I have before observed that the Chinese lose not an inch of ground. They are very far, therefore, from allotting immense parks, of the finest ground, for the maintenance alone of deer, in contempt of the human race. The emperors, even those of the Tartar line, have never hitherto dreamed of forming these parks; still less the grandees, that is, the magistrates and the learned: such an idea could never find place in the mind of a Chinese. Even their country houses, and boxes of pleasure, present nothing to the eye all around, but useful cultures agreeably diversified. That which constitutes their principal beauty, is their delightful situation, judiciously improved; where, in the disposition of the various parts which constitute the whole, there every where reigns a happy imitation of that beautiful order of nature, from whence art has borrowed all her charms.

The most rocky hills, which, in France and other parts of Europe, they turn into vineyards, or totally neglect, are there compelled, by dint of industry, to produce grain. The Chinese are indeed acquainted with the vine, which here and there they plant in arbours; but they consider it as a luxury, and the wine it produces as an unnecessary superfluity. They would imagine it a sin against humanity, to endeavour to procure, by cultivation, an agreeable liquor, whilst, from the want of that grain which the vineyard might have produced, some individual, perhaps, might be in danger of perishing of hunger.

The steepest mountains, even, are rendered accessible. At Canton, and from one extremity of the empire to the other, you observe mountains cut into terraces, representing at a distance immense pyramids divided into different stages, which seem to rear their heads to heaven. Every one of these terraces yields annually a crop of some kind of grain, even of rice, and you cannot withhold your admiration, when you behold the water of the river, the canal, or the fountain, which glides by the foot of the mountain, raised from terrace to terrace, even to the summit, by means of a simple portable machine, which two men with ease transport and put in motion.

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The Chinese nation is capable of the most stupendous works; in point of labour I never observed their equals in the world. Every day in the year is a working day, except the first, destined for paying and receiving visits; and the last, which is consecrated to the ceremonial duties they pay to their ancestors. An idle man would be treated with the most sovereign contempt, and regarded as a paralytic member—a load to the body of which he made a part; the government would in no manner permit it. How opposite from the ideas of other Asiatics, where none are admitted to any degree of estimation but those who, from their situation in life, have nothing to do! An antient emperor of China, in a public instruction, exhorting the people to labour, observed that if in one corner of the empire there was one man who did nothing, there must, in some other quarter, be another who suffers on that account, deprived of the necessaries of life. This wise maxim is fixed in the breast of every Chinese; and, with this people, so open to reason, he who pronounces a wise maxim, pronounces a law.

SHEEP OWNED AND KEPT IN WASHINGTON COUNTY, PENNSYLVANIA.

Dear Sir, *Washington, Pa., Jan. 13, 1826.*

You will recollect that I furnished you with an *estimate* of sheep and wool in this county, which appeared in the Farmer of July 22d, 1825. I observed from the manner in which it was noticed by one or two papers, that some doubt was entertained as to the correctness of the estimate. Indeed, amongst ourselves, much difference of opinion existed on the subject, as no enumeration of sheep had been made since the year 1810. On noticing this, it was suggested to our county commissioners, and they with a promptness honourable to them, directed the assessors of the different townships to take an account of the number of sheep, and return it with their assessment lists. I enclose you the result, which shows that my estimate was below the real number. You will oblige me by publishing this in the American Farmer.

I also enclose you the Report of the committee on *crops*, of our agricultural society. The good spirit of improvement is gradually extending its influence in this country.

I am, sincerely, yours, &c.

ALEXANDER REED

An account of Sheep owned and kept in Washington county, Pennsylvania, taken by the Assessors, in December, 1825.

Washington,	2,303
Straban township,	12,000
Canton,	8,152
West Bethlehem,	4,639
East Bethlehem,	3,948
Robison,	2,416
Smith,	3,804
Hanover,	2,883
Fallowfield,	3,627
Nottingham,* (supposed,)	3,750
Hopewell,	8,422
Cross Creek,	7,762
Somerset,	4,837
Amwell,	5,417
Morris,	6,500
Pike Run,	4,358
Findley,	4,077
Cecil,	4,032
Peters,	3,462
Buffalo,	4,681
Mount Pleasant,	3,992
Chartier's,	5,069
Donegall,	5,320
Total,	110,451

I do hereby certify the aforegoing return of sheep as owned and kept in Washington county, Pennsylvania, is correct, as taken from the duplicates filed in the Commissioners' Office of said county, (except the township of Nottingham.)

A. SUTHERLAND, *Clerk.*

Commissioners' Office, Jan. 13, 1826.

FOR THE AMERICAN FARMER.

SCIENTIFIC MEMORANDA—APPLICABLE TO RURAL ECONOMY.

It is worthy of notice, says Parke, that if clay be exposed to red heat, it can never after become plastic by the addition of water, even though it be first ground to an impalpable powder, unless it be reduced, by chemical means, to its primitive state. See *Chemical Essays.*

This fact best explains the utility of burnt clay to the soil. It improves the texture of stiff soils, by rendering them more friable and open—facilitates the extension of the roots, and renders the earth more permeable to heat, light and moisture, the great agents of vegetable growth. It would seem that the subsoil, or clay containing no vegetable matter, is as good for this purpose as the surface soil, and is used with greater economy. For it is not contended that torrefaction adds to the food of plants, otherwise than by producing a small quantity of soluble matter, at the expense of much inert vegetable matter, which is volatilized and lost in the process of burning. Although Davy found in the ashes of burnt earth, carbonate of lime, gypsum, carbon, and fertilizing salts, he is decidedly of opinion (p. 313,) that the practice of paring and burning can only be profitably employed upon soils which contain more than one half of their weight of vegetable matter, or upon stiff clays and marls. Upon the latter, as before suggested, the improvement is mechanical, and should not be obtained at the expense of the vegetable matter in the soil.

Potatoes.

From 100 parts of the common kidney potatoes, Dr Pearson obtained from 32 to 28 parts of meal, which contained from 23 to 20 of starch and mucilage: and 100 parts of the apple potato, in various experiments, afforded from 18 to 20 parts of pure starch. From five pounds of potatoes of different kinds, Mr. Shrimshire obtained from 20 to 13 per cent. starch. See *Davy's Ag. Chem.*, p. 125. Dr. Pearson found the meal of the potato to contain 98 and 99 per cent. nutritive matter.

From these experiments, it seems, that there is a difference of nearly 100 per cent. in the nutritive qualities of the different varieties of this root; and the role will hold good, that they are esteemed for the table in proportion to the quantity of nutritive matter which they contain. It is shown by the experiments detailed in the American Farmer of the 27th of January, that the increase of flesh in an animal, is equal to the weight of the nutritive matter contained in its food. Thus, a hundred weight of kidney potatoes, fed to a Devon bullock, would, according to those tables, increase the flesh of the animal at least 30 lbs.; while an hundred weight of the axnoble potato would increase it only about 18 pounds. This is an important consideration to those who raise this root for fattening stock, and it is no less so to those who cultivate or buy it for the table. I am disposed to believe, from my own observation, that the most nutritious are the least productive; and that the difference in nutritive matter, from a given surface of ground, is not so great as on first thought would seem to exist. Two fine table potatoes which I cultivate, give but about two thirds the product of coarser varieties, and require, withal, a better soil. The Mercer, a variety cultivated about Philadelphia, is said to be an exception to the rule, and to be fine for the table and very prolific.

The effect of the hot weather of last summer, in impairing the quality, as well as in diminishing the quantity of the crop, tends to corroborate an opinion often expressed, that moist, cool, but mellow soils, are best adapted for potatoes. Those which I raised on sandy and dry grounds were of an inferior quality, and gave a lean product—while my principal crop, grown on a reclaimed swamp, afforded a great yield, and were of fine flavour. Another evidence in support of this conclusion, is, that the quality of the potato generally deteriorates as we go south, and is no where found in higher perfection than between 42 and 50° N. lat. Those of the north abound most in starch and mucilage. The disadvantage of climate can be partially remedied by the selection of soils, and the application of long coarse manures.

Lime—its use in making Soap.

The use of lime in the manufacture of soap has long been practised in families, without its chemical operation being well understood. It is either incorporated with the ashes, or put separately into the leach. The alkali is naturally combined with a carbonic acid, and while this union exists, it will not incorporate with the oil or grease, to form soap. The lime has a stronger affinity for carbonic acid than the alkali has; it of course unites with it, and leaves the latter free to unite with the oil. To produce the desired effect, therefore, fresh-burnt lime should be used, and incorporated with the ashes, or placed at the bottom, that the ley shall filter through it. Potash should be dissolved and leached through lime before it is fit for soap.

HORTICULTURE.

DISEASES OF FRUIT TREES.

In No. 43, page 339 of the current volume of your valuable journal, I have noticed a communication from Mr. J. Buel, of Albany, on the disease of the plum and morello cherry trees, and containing some strictures on a paper which I addressed to the Pennsylvania Agricultural Society, under date the 1st of January, 1824. I am much gratified that Mr. Buel has given his views on so interesting a subject; but inasmuch as he has failed to convince me of error on some points, a further discussion may not be unprofitable; and I beg leave to assure him, that I shall really feel happy to have my opinions controverted whenever they cannot be supported by facts. But I think he has mistaken my position, when he asserts, that the remedy recommended *by me* is, "to score the bark in a perpendicular direction along the trunk." Now, by a reference to my paper it will appear that, after I had discovered that the lodgment of the insect was subsequent to the formation of the excrescences, I was led to believe, that "the excrescences were a mere exudation of the sap in the tender branches, occasioned by a bark-bound state of the trunk," and that I was induced to try a remedy which had been *mentioned to me*, viz: scoring the bark, and that I found several decisive advantages attending the operation; then explaining the manner in which I conceived the operation should be performed, I added, that "from a further attention to this valuable tree (the morello,) I am of opinion, that its failure is, in a great measure, owing to the circumstance of its being generally *propagated by suckers;* and if such be the fact, we should find a very easy remedy in raising new trees from seeds." I made the same suggestion respecting the plum. Now, as to the advantages of scoring, I will mention, that in the year 1820, I selected for experiment two trees which stood near to each other: early in March, I scored one of them by making three incisions along the trunk, extending from the branches to near the root. The next spring, the tree which had not been scored, became so diseased, that I thought it necessary to take the whole head off—whilst the scored one remained perfectly healthy. Another case, which came under my observation, was a large tree of a different species of cherry. Its trunk was about thirteen inches diameter. In the year 1819, it became much diseased in the outer branches, but in the course of that year the bark opened along the trunk, in a perpendicular course, as if it had been scored. The next spring it threw out new shoots from below the diseased parts, and assumed a healthy appearance: and during that year a ridge formed where the bark had been opened, jutting out an inch beyond the general round of the trunk. This latter case being an operation of nature, it made a strong impression on my mind; and the owner of the tree, Joshua Tyson, Esq., of Montgomery county, informs me that it is still in a healthy state, and bears abundantly; and that he has frequently tried scoring with great success. A very observing farmer, of Philadelphia county, says, that he has preserved his pear trees from blast, by cutting out a narrow slip of bark (in a perpendicular manner,) along the trunk; and he recommends the operation to be performed in the months of May and June, the wound to be immediately bandaged or plastered; and he thinks that in many cases it might be useful to repeat the operation the same season. I would not, however, wish to be understood as objecting to Mr. Buel's most excellent plan of "a good scouring and plenty of food," and doubtless if "a wash of ley or soap suds" was timely applied, it would give ample expansion to the bark, and might be preferable to scoring; but when disease has taken place, the knife may be as useful as in the case of a hovened animal.

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*Nottingham, a large township not yet officially heard from, but supposed, from its extent, to contain at least the number set opposite to it.

But Mr Buel appears to have mistaken my hypothesis, which was, that I supposed the failure was owing to the mode of propagation; that is, by transplanting suckers; and the remedy in such case would be in planting seeds. He has, I think, strengthened my supposition, when he says, that he cut down or pulled up nearly fifty, among four hundred, (plum stalks,) *principally sprouts* which he had *selected*, and planted from a garden two miles distant. His practice of amputating and burning the diseased parts, may be useful, and, perhaps, with his good nursing, may be completely successful; and yet I must object to his first conclusion, "that the insect is the cause and not the consequence of the tumor;" because I have satisfied myself that the lodgment of the insect is not made till after the disease commences. His second and third conclusions I pass over as not coming within my view of the case. The prompt use of the knife in the early stage of the disease, as stated in his fourth conclusion, I think would be beneficial to the tree, and perhaps better than scoring; but burning the diseased parts would, in my opinion, be of little consequence. I am supported in this opinion by the very respectable authority which he quotes from Professor Peck's paper of 1819. The Professor first establishes the fact, that the disease is in the bark, and then supposes the evil to be occasioned by an insect; but, in identifying the insect here spoken of, with that which causes the premature fall of our young fruit by eating into the kernel, he confutes (in my humble view of the case,) his own supposition; because, if it is the same insect, I would almost as soon believe that it might form fruit, as to cause those tumors. I should rather be convinced that the tumors are as congenial to it, as young fruit; and at that early season of the year may be preferred; indeed fruit is then scarcely in a state to be affected, and I have found that such is the sagacity of insects, that they do not deposite their ova, until provision is made for the offspring; and it may be, that this insect is induced to commence its operations earlier than formerly, in consequence of the recent provision to suit its purposes. With respect to planting seeds as a remedy, I can only say, that my experience is very limited; but I have not yet discovered a single instance of disease in a seedling. May it not then be that the disease of the plum and morello cherry trees is owing to propagating from suckers or sprouts; because those suckers being so connected with the parent tree as to derive their principal support therefrom, they may partake of all its infirmities, and like a spoiled child, on being turned off, may be utterly incapable of acquiring subsistence. Many respectable orchardists assert, that a graft is of similar age to the tree from which it is taken; and thus they account for the failure of some species of fruit, and if so, the doctrine may be applied to suckers or sprouts.

My former communication on the diseases of some species of fruit trees, was simply intended to convey a few circumstances which came under my own observation, with a view to induce others of more experience to embark in a cause to the community; and I rejoice that I have succeeded in drawing out the very respectable talents and practical information of Mr. Buel; and I am now constrained to offer another mite, with the same view; and if even my errors should be the means of the continuance of his praise worthy labours, and of stimulating others to furnish their stock of knowledge, I shall consider myself amply compensated.

JAMES WORTH.

Sharon, 31*st January*, 1826.

FRUIT TREES.

Dear Sir, *Poplar Grove*, 6*th Feb.*, 1826.

When I sent you a few cuttings last spring from the "Scrivener's Red" apple, they were taken by an injudicious hand; and when the proper season arrives again for grafting, I will send you a few more, if they be desired, taken more carefully. I then promised I would give, at some future time, a description of the fruit, and will now redeem my promise. If I recollect right, I then recommended this apple, because it was a new variety; and it is believed, no doubt truly, to have originated in this county. Thus it is more likely to continue to produce more healthful trees than are to be expected from other fine sorts, that have been known to have been in existence for centuries You know that the fact seems now to be established, that scions or grafts from the parent tree, are but a continuous growth from the same tree, and liable to decay, at or about the period, when, without the intervention of other causes, that tree would naturally decay from *old age.**

I recommended this apple, also, because of its being a great and almost constant bearer; so much so, that the limbs are apt to become pendant in their growth, like those of the willow—because it is a pleasant eating apple, both early and late in the winter—and because it produces cider of a most pleasant and agreeable flavour.

There is one objection, however, to the cider; and that is, that it has not body enough to keep in bottles without breaking them. But half the quantity of the Hughes' crab, or any apple which produces *must* as strong as the crab, added to it, obviates this objection.

Mr. Coxe, the only American writer on the subject of fruit trees in this country, but who writes with great practical experience, thus describes the "Scrivener's Red." "It is a handsome and fair apple—the colour a bright red, with faint red streaks and small white spots, its appearance resembling the wine-sap; the stalk is long, and grows in a deep cavity; the shape oblong, diminishing towards the crown; the flesh is juicy, breaking, and highly flavoured; it ripens in October and keeps well. It is an admired cider fruit in some parts of the states of Maryland and Delaware."

In planting orchards most persons are inattentive to the necessity of planting trees of the different sorts together, and as much separated from others as practicable; and they very frequently jumble all sorts together promiscuously. Persons whose attention has been called to this fact, have not failed to observe that apples, cherries and peaches will mix or blend their different qualities, when growing *near to each other.* We have, besides observation of our own, high authority for asserting this fact. Mr. Knight, the celebrated English horticulturist, asserts that "each blossom of the apple contains about twenty male and five female parts. A few days before the expansion of the blossom, he opened the petals, and destroyed all the males, leaving all the females uninjured; when the blossoms were fully expanded, he impregnated them with farina taken from another kind with which he wished to cross the kind: all the impregnated fruit grew rapidly, some of the fruit partaking of the properties of the male, and others of the female parents; and in some both were blended." Mr. Coxe also states that he had seen an exemplification of this principle of nature exhibited "in the mixture of the properties of a Newton pippin and a Russeting, from the accidental mingling of the limbs of two trees growing in an orchard at Trenton, in the state of New Jersey; one end of each was strongly marked, externally, by the character of the russet parent, the other equally resembled the pippin—the flavour and juice of each corresponding exactly with its external appearance." I have noticed the like operation of nature in a cherry tree, grafted some time since, when pretty well grown. The branches of one side were filled with grafts of a large white heart, and those of the opposite side were filled with grafts from a large black heart. They were both early cherries, and blossom and ripen at the same time. The fruit of the interior of the tree, and where the branches commingle, appears to participate equally

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[* This fact is asserted on very high authority, but is not, we think *established.*—Ed.]

of each kind, and is of a pale red colour, while that which is produced on the extremities of each side, is not so strongly marked in its characteristics as the fruit growing on other separate trees, not near to other kinds. Having unadvisedly planted a valuable collection of peaches many years ago, all jumbled together, I now find all the kinds, more or less, participating of the quality of the kind of fruit contiguous; and in truth there is now, since the trees have grown up and interlocked in their branches, no fine variety that is perfectly distinct, like those growing on single standards, standing isolated, or only with their own variety. I find the stones of those of the mixed parcel of trees, uncertain in producing the proper variety of the parent tree; while those from the isolated trees, have afforded *invariably* with me, the same variety. This commixture, however, does not prevent the bud, or grafts, from invariably producing the same variety of the parent tree. Hence I have been able to unveil to my own satisfaction the mystery which has hung about the assertion of all the English books and gardeners that I have consulted, who invariably maintain that the peach stone will not, with certainty, produce the same fruit as the parent tree. I have more than once had disputations with scientific foreign gardeners on this point; and my experience further is, that the stones of budded peach trees *will* produce the fruit of the budded tree, without doubt; a thing they utterly deny. The *uncertainty*, therefore, rests with the stones of such peach trees as stand within the reach of the farina from other peach trees, while in blossom. I am now making new plantations of fruit trees, and arranging them upon the *conclusion, that to have fine fruits, we should plant the different varieties in insulated compartments.*

If nothing happens, and I think of it at the proper time of ripening, I will send you a peach growing where the branches of a claret peach interlocks with those of a Newington; and you will find the fruit externally *resembling* Newington, but internally having the claret colour and acidity.

Very truly, yours,
THOMAS EMORY.

From the Westminster Review—London.

HISTORY OF ANCIENT AND MODERN WINES.

By Alexander Henderson, M. D.

(Continued from page 373.)

The Fifth chapter treats of the principal Greek and Asiatic wines, the Maronean of Homer was a black, sweet wine of choice quality; the Pramnian, also mentioned by him, was a strong, hard, astringent liquor, Dr Henderson supposes not unlike Port wine, like this, it was commended for its medicinal uses. It was in luscious sweet wines, however, that the Greeks excelled and delighted, and in praise of which their later poets sang, they were principally the products of the islands of the Ionian and Egean seas. Lesbos, Chios, and Thasos yielded those most highly esteemed, they were of a straw colour, and the Saprian, which Dr. Henderson thinks was Chian matured by great age, possessed an exquisite aroma. The Lesbian was less odorous, but of a delicious flavour; the Thasian, a generous, sweet wine, ripening slowly, to which age gave a delicate odour of the apple. The produce of the Arvisian vineyards on the craggy heights of the coast of Chios, is represented by Strabo as the best of all Greek wines, of it there were three species, a dry, a sweet, and a third of a peculiar quality. To this account of the richer and more powerful Greek wines, we may add a notice or two. Dr Clarke [*Travels*, iii 240, note, 8vo edit.] informs us that the ancient medals of Chios, which are not uncommon in the Levant, "have all reference to the Chian wine, which retains its pristine celebrity; and represent, in front, a sphinx with a bunch of grapes; for the reverse, an amphora, with other symbols of the island's fertility." The Chian wine was so highly esteemed, and so rare and dear when it was first introduced among the Romans, that at their greatest entertainments only one cup of it was presented to each guest [*Domestic Manners, &c. of the Romans*, p. 211]. Dr. Henderson informs us that Corcyra, Cyprus, Crete, Cnidos, and Rhodes, yielded wines, which, as well as those of Lesbos, &c. were much esteemed by the Greeks. According to Olympiodoros, however, as quoted by Casaubon in his notes on Athenæus [Lib. i. c. 25], wine made in Egypt, and brought thence by Cnidian merchants, was called Cnidian wine.

Pliny asserts that the Lesbian wine had a saltish taste; and the wines of Naxos, Rhodes and Cos, were still more liable to the same censure [p. 78], Archilochus, in Athenæus, however, compares that of Naxos to nectar; according to the same author, the Mendean wine, which Dr. Henderson informs us was a white wine of very moderate strength, was remarkable for its delicacy, occasioned, it was supposed, by the grapes, while on the vine, being sprinkled with elaterium—p. 78.

The Greeks were familiar with the best wines of Asia and Africa. We are doubtful whether the Biblian wine, extolled by Hesiod [*Opera et Dies*, v 587], was the wine of Byblos in Phœnicia mentioned and described by Dr. Henderson [p. 79], or the produce of a particular grape, called *biblia*, and consequently a Thracian wine [p. 94]. Tzetzes expressly says, that the Biblian wine of Hesiod was from Thrace. As occurring in the genuine work of that poet, it undoubtedly, next to the wines mentioned by Homer, is one of the oldest wines of which we possess the specific denomination. In Pasor's Lexicon to Hesiod, it is characterized as having been a vinum theologicum.*

Of the African wines, those of Marsotis and Tæniae, according to Athenæus as quoted by Dr. Henderson, were of almost unrivalled excellence: and the wine of Meroe, the favorite beverage of Cleopatra, bore some resemblance to the celebrated Falernian. The Tæniotic was a grey or greenish wine, rather astringent, but also luscious, of a rich aromatic odour. It would seem, however, from an epigram of Martial, already quoted, that many of the Egyptian wines were of very inferior quality; and Macrobius expressly states, that they were of a very cold nature, expressing his surprise that they should be so, the climate being so hot.—*Saturnal.* Lib. 7. ch. 8.

Xenophon, in his Anabasis, mentions a wine he met with in Western Armenia of an exquisite flavour and taste; and near the shores of the Euxine, a sort of wine which, when unmixed, was extremely rough and sour, but was rendered palatable by a mixture of water. The people who used this wine, eat bread a year old, and boiled chestnuts and pickled dolphins, the fat of which they used instead of oil [*Univer. Hist.* vii. 475, 490]. In Asia Minor, besides the places mentioned by Dr. Henderson, Lampsacus, which was assigned to Themistocles by the Persian monarch to supply him with wine, is said to have had in its vicinity the noblest vineyards in the East: [Nepos and Plutar. *in vit. Themist.*] and Laodicea in Syria—a country, according to Volney, still celebrated for its wine, sent large quantities to the Red Sea [*Vincent*, ii. 750]

Perhaps a short notice ought to have been taken of the principal wines mentioned in Scripture: Dr. Henderson, in his Appendix, notices the wine of Chalybon, which occurs in the catalogue of the merchandise of Tyre, given by Ezekiel [xxvii. 18]. This, according to Athenæus, was the only kind the kings of Persia drank [p. 396]. Choicest wine, or the wine of Sorek, as it is rendered by Lowth, is, mentioned, Genesis, c. 49, v. ii. and Isaiah, v. 2. The vines from which it was made were very large: Chardin saw such vines at Casban in Persia [*Travels*, iii. 12]. Lebanon wine is extolled, Hosea, xiv. 7.; and Messrs. Irby and Mangles describe it as a delightful wine. [*Travels in Egypt, Syria, &c.* p. 219]. In the East they kept their wine in jugs, and filtered or strained it through a cloth before they drank it: the Jews were very careful about this, lest a forbidden insect should be in it; hence the phrase straining at a gnat.—Border's *Oriental Customs*, ii. 37. 224.

The principal wines of the Romans form the subject of the Sixth chapter. Though we are perfectly aware of the express authority of Ovid, [*Fasti*, Lib. iv. v. 890] for the circumstance respecting Menzentius, mentioned by Dr. Henderson, we cannot regard it as sufficient to establish the reality of any fact at such a remote period. That the Romans, however, were acquainted with wine very early, and before they borrowed the name for it (*vinum*) from the Greek (οινος.) we think may fairly be deduced from a passage in Aulus Gellius. According to this author, wine was called *temetum* in the ancient language of Italy [*Noctes Att.* Lib. x. c. 23]. In the dictatorship of Camillus, an inhabitant of Clusium bribed the Gauls to enter Italy by carrying them some wine [Liv. Lib. v. c. 33]. Etruria, therefore, in which Clusium was situated, must have cultivated the grape at this period: but we know of no proof that it was cultivated in any other part of Italy, nor the circumstances, or time of its introduction; it probably, however, spread from Etruria and the Greek colonies in the South of Italy. In the early ages of the commonwealth, either its extreme scarcity or the austerity of their morals excluded men till they had attained the age of thirty from drinking it: about a century before the Christian æra, the cultivation of the vine, and the manufacture of its beverage were general; and in the time of Pliny, of the twenty four kinds of wine esteemed most highly by the ancients, Italy produced two thirds [Plin. *Nat. Hist.* xiv. ii]. Livy complains, that, even in his time, luxury had taken such strong hold and spread so much, that all wines, except those of Falernum and Chios, were despised, and that this rage for them had raised the price of the former to 100 denarii the testa [Lib. 70. c. 9]. The whole of his animated and indignant picture of the extravagant luxury of his countrymen is worth perusing.

But to return to Dr. Henderson. The Campania Felix, distinguished for its extraordinary fertility and delightful climate, produced the richest wines. "In ancient times," observes our author, "the hills by which its surface is diversified, seem to have formed one combined vineyard, and every care was taken to maintain the choice quality of the produce" [p. 84]. Falernian was the name given to the most celebrated of these wines; but under this appellation seems to have been often arranged and sold, the produce of the adjacent districts of Gaurus and Marsicus. According to Pliny; as quoted by Dr. Henderson, the Cecubian, the produce of the poplar marshes of Amyclæ, had been in highest estimation;

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* Theocritus states that this wine was presented at a feast as a great treat, pullets and a sucking pig were the principal eatables. The Scholiast on the passage considers Biblian as a Thracian wine.

The phrase vinum theologicum, which Dr. Henderson uses [p. 147], when speaking of the superiority of wines raised in lands belonging to the church, seems to have puzzled honest Montaigne, he is doubtful whether it be in jest or earnest, that the theological and sorbonnical wine, and their feasts, are turned into a proverb [Essay on Experience]. Bayle [in voc. Erasme] and Henry Stephens had no such doubts: the latter in his chapter de la gourmandize et yvrognerie des gens d'Eglise, [apol. pour Herod. c. 22] shews, that the equivalent phrase may be found in Horace: mero Tinget pavimentum superbo Pontificum potiore cœnis: and he refers to an old gloss, which explains the passage by a reference to the phrase in question. The whole chapter of Stephens, as well as the work in which it occurs, is worth reading.

but the negligence of the growers and the formation of a canal had injured its reputation. The Falernian had the second rank, or perhaps, then, the first; by attempting to make too much, its reputation, also, was injured. The wine of Alba was third in rank: it was very sweet. According to the same authority, Augustus, and most of the leading men of his time, gave the preference to the Setine wine; though, as Dr Henderson observes, it is extraordinary that this wine is never once mentioned by Horace.

Dr. Henderson is of opinion, that the Cecuban was a rough, sweet wine; the Setine a delicate light wine: both, in the time of Pliny, had become very scarce. The Falernian he pronounces to have possessed the most distinct features of resemblance to the modern wines of Xeres and Madeira [p. 91]. It was of a very durable quality, as was also the Surrentine, the produce of the Aminean grapes: the wine of Capua resembled the Surrentine. Such were the principal and most celebrated wines of the Campania Felix, according to Dr. Henderson.

The Rhœticum, which is incidentally mentioned in the chapter on the wines of modern Italy, ought to have been noticed here: it was made near Verona, was a favourite wine of Augustus, and is celebrated by Virgil. [Suet. *in August.* c. 77. Virg. *Georg.* ii. 95].* We learn from the curious passage in Vopiscus's life of Florian already referred to [*Hist. August. Scriptor.*], that the Fundanum, mentioned by Pliny and Martial, was a white wine. The Signinum, rough and astringent, Dr. Henderson classes with the white wines. Among the lighter growths of the Roman territory, the Sabinum was a thin table wine; the Nomentan a delicate claret wine; and that of Spoletum, of a bright golden colour, light and pleasant.

Dr. Henderson next notices the Sicilian vintages, which, in the arrangement of Pliny, formed a fourth class of wines. We shall premise a few historical facts relative to the introduction of the vine into this island. "In the time of Homer," to use the words of Gibbon. "the vine grew wild in the island of Sicily, and most probably in the adjacent continent; but it was not improved by the skill, nor did it afford a liquor grateful to the taste of the savage inhabitants." [*Decline and Fall*. i. 85]. The Pollium of Syracuse a sweet wine, which Dr. Henderson states to have been the produce of a particular grape called Biblia, "probably so called from the town of Bibliæ in Thrace," is expressly mentioned by Athenæus as having received its appellation from Pollio of Argos, who, according to that author, governed Syracuse, and introduced into Sicily the winding vine, called Biblian. At what time Pollio lived is uncertain; but Stolberg, to whom we are indebted for this reference to Athenæus, thinks he must have lived before Gelo [*Travels*, iv. 332, note]. The Biblian wine, whether that of Thrace or Bithynia, seems at a very remote period to have attained celebrity; the notice of it by Hesiod has been already referred to.

Of the Sicilian wines, Dr. Henderson informs us, that the Mamertine, from the neighbourhood of Messina, were light and astringent; they were first introduced at public entertainments by Julius Cæsar: those of Taurominium being of a similar quality, were often substituted for them. He is silent, however, respecting the wine made near Agrigentum on the rich soil of what had formerly been a pond of great extent and depth, which Gelo compelled his Carthaginian prisoners to make [Diod. Sic. Lib. xi. c. 2]. In the time of Pliny, the culture of the vine was extended to the foot of the Alps, but as the produce of the vineyards to the north of the Campania Felix was of an inferior quality, Dr. Henderson has very properly bestowed on them a very cursory notice. The wines of Calabria, however, should have been adverted to; especially that which was made at Aulon, a hill near Tarentum, which, in the judgment of Horace, minimum Falernis invidet uvis [*Carm.* ii. 6]. This hill, according to Martial, was no less celebrated for its fleeces than its wine.—Lib. xiv. ep. 125.

The Romans, besides their own wines, imported others from the subject provinces; Greece, Gaul, Spain, and the Archipelago: the violet-scented grape of Vienne, and the rich muscat of Languedoc were well known, as well as the strong wines of Spain. The Balearic islands also furnished some wine esteemed equal to any of the growth of Italy.—Anderson's *Hist of Commerce*, i. 129.

The very common wines of Italy, which, as a beverage, Dr. Henderson supposes to have been scarcely equal to our table beer were allowed in great abundance, even by the frugal Cato, to his farm servants; but the richer sorts, especially those of foreign growth, were very rare, even in the time of Lucullus. According to Varro, as quoted by Dr. Henderson, "Lucullus, when a boy, never saw Greek wine presented to the guests oftener than once at any of the great entertainments given by his father; but when he returned from his Asiatic expedition, he himself distributed upwards of 100,000 gallon casks. C. Sentius, late Prætor, used to say, that Chian wine was first introduced into his house as a cordial prescribed to him by his physician; Hortensius left upwards of 10,000 casks of it to his heir," [p. 96]. If we reduce the gallons to quarts, still 100,000 of them, or upwards of 400 hogsheads, as Dr. Henderson observes, "must be acknowledged to have been a very liberal distribution of foreign wine, even for a person of such prodigality as Lucullus, to the populace of Rome"—p. 97.

That the populace, however, in the progress of luxury were led to regard wine as almost equally essential with corn, and cried out with nearly equal violence at the scarcity of each, appears from several passages in the ancient authors Suetonius informs us, that the populace made sad complaints in the reign of Augustus of the scarcity and dearness of wine; and that this emperor replied, his son-in-law Agrippa had taken care they should not perish by thirst, by the supply of water he had brought into the city; or rather, perhaps, alluding to the *curatores aquarum*, consisting of two hundred and sixty, first instituted by Agrippa for the care of the Aqueducts. [Sueton *August.* 42. *Frontin. de Aquæduct*]. Vopiscus, in his life of Aurelian, informs us of a project of that emperor to supply the populace with wine, as they were wont to be supplied with bread, oil, and pork, and to cultivate the unoccupied land with vines for this purpose: but he was dissuaded from his design by the obvious and judicious remark, that if he gave them wine, on the same principle, he might give them every luxury. He did, however, deposit wines in the Temple of the Sun, which probably were sold at a low price [Vopis. *Aurel.* 893]. A certain quantity of wine seems to have been allowed by the emperor to tribunes of legions and other functionaries, called *vinum mensale* [Vopis. *Aurel.* 841. Trebell. Poll. *Claudius*, 817]. And we may infer from an edict of Niger, that wine had become very generally drunk by the Roman army while on service, since he expressly forbad it, and ordered that all should be content with vinegar [Spartian. *Niger*, 380].*

The methods employed by the ancients to dilute and cool their wines, forms the subject of the Seventh chapter. It was deemed disreputable and barbarous to drink wine unmixed with water: but we may remark, by-the-by, that mixed wine had a very different meaning among the Orientals, from what it had among the Greeks and Romans. Among the latter, it meant wine mixed with water; of course, a beverage of inferior potency to wine; among the Orientals, mixed wine was wine rendered more potent by the admixture of spices, &c. [Lowth on Isaiah, i. 22]. Helen is represented by Homer, as mixing spicy ingredients with wine; this practice she had learnt in Egypt.—*Odyss.* iv. 220.

Hesiod, in the passage we have already referred to, advises, that the Biblian wine should be mixed in the proportion of one to three with water: the proportions, however, varied according to the strength and nature of the wine, and the taste or habits of the drinker. Five parts of water to one of wine seem to have been the usual mixture. When Homer and other authors mention and recommend so large an admixture as twenty or twenty-five parts, "the wine may be said to have been used merely for the purpose of giving a flavour to the water" [p. 99]. Even half and half, which was thought to be unsafe, gives us a strange idea, either of the strength of the wines, or of the weakness of the heads of the ancients. "Since water then entered so largely into their beverages, neither labour nor expense was spared to obtain it in its purest state, and to ensure an abundant supply, from those fountains and streams which were thought to yield it of the most grateful and salubrious quality," [p. 99]. Dr. Henderson mentions some curious facts, indicative of the high esteem in which the water of the Nile was held by the kings of Egypt, and that of the Choaspes by the kings of Persia: the latter always carried a supply of it along with them in their expeditions. To these notices of our author, we would add a reference to a very strong instance of the superstitious attachment of Xerxes to the water of Choaspes, recorded by Ælian, [*Var. Hist* Lib. xii. c. 11] to the allusions in Tibullus, "regia lympha Choaspes," and in Milton, "the drink of none but kings." We may also add on this topic, that Aurengzebe carried the water of Solomon's Well with him from Delhi to Cashmere; and that the opulent Hindoo always travels with the waters of the Ganges [Forbes, *Orient. Memoirs*, iii. 272]. Of the springs of water, "the Aqua Marcia, so called from Ancus Marcius who first brought it to Rome, was held in peculiar estimation, on account of its extraordinary freshness and purity, and appears to have been preferred by the Romans to all others, for the purpose of diluting their wines"—p. 100.*

There is no evidence that hot water was mixed with wine in the time of Homer; but afterwards the

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* According to Suetonius, Augustus was extremely moderate in his use of wine: if he exceeded a small quantity, he did not retain it. Bread dipped in cold water, a piece of cucumber, a leaf of young lettuce, or an apple of a vinous flavour, formed his usual portion.

* The notices of the luxury of the later Roman emperors in the Histor. August. Scriptor. which was as often absurd and childish, as it was extravagant, are very numerous. See particularly Vopisc. Carinus, p. 988. Trebell. Poll. Gallienus, p. 735, and Lamprid. Heliogabalus, 481, &c. It is not necessary, however, to read these passages in order to smile at the declamation of Pliny, who mentions it as an instance of the depravity of his times, that men, not satisfied with wine, contrived that even water should contribute to inebriate them: alluding to a kind of beer, which he informs us was made by fermenting several species of grain in water [Nat. Hist. xiv. 22]. As the manufacture of a pleasant or intoxicating beverage from barley or other grain is not very obvious or simple, it is singular it should have been practised at a very early period, in countries not at all connected, and most of them in a very rude and barbarous state, Egypt, Asia Minor, Germany, Gaul, Britain, Spain, &c.

* From a passage in the Sylvæ of Statius, it would appear, that the Aqua Marcia was carried in leaden pipes, under, or rather perhaps through, the river Anio [Lib. i. Silv. iii. v. 66-68]. The Romans made frequent use of pipes in conveying water: and Pliny expressly states, that water in leaden pipes would rise to the height of its source; so that aqueducts were built, not, as is often supposed, from their ignorance of this fact. The two epigrams of Martial on the extreme scarcity of water at Ravenna, afford another proof of its being deemed necessary in their wine.—Lib. iii. ep. 56, 57.

Greeks used it for this purpose, and the practice passed from them to the Romans. We quite agree, however, with Dr Henderson that, "so far was mere hot water from being considered a luxury by the Romans, that we find Seneca speaking of it as fit only for the sick, and as quite insufferable to those who were accustomed to the delicacies of life: and that the true cause of the frequent calls of the guests at an entertainment, or the interlocutors in an ancient drama, for hot and tepid water, must be sought for in their notorious intemperance in eating" [pp. 101, 103]. "Hot water, and all kinds of prepared liquors were sold at the Thermopolia, or public houses, which Claudius, and afterwards Ampelius, the prefect of Rome, in vain endeavoured to suppress or to regulate [p. 104]. "As the Romans lived much in public, and but few had the necessary conveniences for keeping a stock of wine in their dwellings, persons of moderate fortune were supplied with a cask as they wanted it from one of the public repertories (horrea), where wines of all ages and qualities were to be had" [p. 103]. These *horrea* went by different names, as *Sulpicia horrea; Sempronia horrea;* and contained not only wines, but many other commodities. In the reign of Antonine, it seems to have been customary for the citizens who had no secure place in their own houses, to send their valuable articles, not in immediate or frequent use, to these horrea; and this regulation was enforced by Alexander Severus [Lamprid. *Sever.* 535]. Dio expressly calls them repositories or warehouses for Egyptian and Arabian commodities. That there were, however, regular wine merchants, who formed a company or corporate body, appears from an old inscription given by Casaubon, in his notes on Lampridius's Alexander Severus, and by a decree of Alexander Severus, expressly mentioned by Lampridius [*Hist. August. Scrip.* p. 541]. The ancients employed a very simple, but effectual apparatus, which Dr Henderson describes from Vitruvius, Seneca, and Palladius, in order to have at their command a supply of water hot, tepid, or cold, for the purposes of bathing and drinking. It further appears, from Statius, that water was conveyed to all the chambers in pipes; and the same author seems to describe something very similar to the present mode of heating by steam; or, perhaps, a vapour bath.[*] There were salt water baths at Ostia in the third century.[†]

(*To be continued.*)

RURAL ECONOMY.

BEES.

A subscriber to the American Farmer will be thankful to Mr. Williams to state, particularly, the manner in which he succeeded to colonize each swarm of his bees, without allowing them to migrate by swarming; and describe the manner of constructing his hives, and of connecting them; also to state, what indications he had, by which he knew when to connect the new hive. Until the last two years, the want of white clover, and the depredations of the bee moth, had nearly extirpated bees from the Eastern Shore of Maryland. But the last two years have proved, that a plenty of their food, enables them to increase, notwithstanding the ravages of their insidious and desperate enemy. The useful economy of the bee, and her excellent stores, few farmers are insensible to, though they act too frequently as if they were so.

Inquirer.

Honey.—Mr. Ezra Williams, of Ashfield, Massachusetts, bought a hive of bees six years ago, and afterwards connected other hives with the original one in such manner as to prevent the bees from swarming. He took up the hives a few weeks since, and after making half a barrel of metheglin, had 293 pounds of strained honey, and 91 pounds of excellent honey in the comb, making 384 pounds. He made also 37 pounds of bees'-wax.

LADIES' DEPARTMENT.

PEEVISHNESS, EQUALLY WRETCHED AND OFFENSIVE.

THE CHARACTER OF TETRICA.

Rixatur de lanâ sæpe caprina. Hor.
For nought tormented, she for nought torments.
Elphinston.

Ladies seldom give pleasure, where they are not pleased themselves: it is necessary, therefore to cultivate an habitual alacrity and cheerfulness, that in whatever state we may be placed by Providence, whether we are appointed to confer or receive benefits, to implore or to afford protection, we may secure the love of those with whom we transact. For though it is generally imagined, that he who grants favours, may spare any attention to his behaviour, and that usefulness will always procure friends; yet it has been found, that there is an art of granting requests, an art very difficult of attainment; that officiousness and liberality may be so adulterated, as to lose the greater part of their effect; that compliance may provoke, relief may harrass, and liberality distress.

No disease of the mind can more fatally disable it from benevolence, the chief duty of social beings, than ill humour or peevishness; for though it breaks not out in paroxysms of outrage, nor bursts into clamour, turbulence, and bloodshed, it wears out happiness by slow corrosion, and small injuries incessantly repeated. It may be considered as the canker of life, that destroys its vigour, and checks its improvement; that creeps on with hourly depredations, and taints and vitiates what it cannot consume.

Peevishness, when it has been so far indulged, as to outrun the motions of the will, and discover itself without premeditation, is a species of depravity in the highest degree disgusting and offensive, because no rectitude of intention, nor softness of address, can insure a moment's exemption from affront and indignity. While we are courting the favour of a peevish man, and exerting ourselves in the most diligent civility, an unlucky syllable displeases, an unheeded circumstance ruffles and exasperates; and in the moment when we congratulate ourselves upon having gained a friend, our endeavours are frustrated at once, and all our assiduity forgotten in the casual tumult of some trifling irritation.

This troublesome impatience is sometimes nothing more than the symptom of some deeper malady. He that is angry without daring to confess his resentment, or sorrowful without the liberty of telling his grief, is too frequently inclined to give vent to the fermentations of his mind at the first passages that are opened, and to let his passions boil over upon those whom accident throws in his way. A painful and tedious course of sickness frequently produces such an alarming apprehension of the least increase of uneasiness, as keeps the soul perpetually on the watch, such a restless and incessant solicitude, as no care or tenderness can appease, and can only be pacified by the cure of the distemper, and the removal of that pain by which it is excited.

Nearly approaching to this weakness, is the captiousness of old age. When the strength is crushed, the senses dulled, and the common pleasures of life become insipid by repetition, we are willing to impute our uneasiness to causes not wholly out of our power, and please ourselves with fancying that we suffer by neglect, unkindness, or any evil which admits a remedy, rather than by the decays of nature, which cannot be prevented or repaired. We therefore revenge our pains upon those on whom we resolve to charge them; and too often drive mankind away at the time we have the greatest need of tenderness and assistance.

But though peevishness may sometimes claim our compassion, as the consequence or concomitant of misery, it is very often found, where nothing can justify or excuse its admission. It is frequently one of the attendants on the prosperous, and is employed by insolence in exacting homage, or by tyranny in harrassing subjection. It is the offspring of idleness or pride; of idleness anxious for trifles; or pride unwilling to endure the least obstruction of her wishes. Those who have long lived in solitude indeed naturally contract this unsocial quality, because, having long had only themselves to please, they do not readily depart from their own inclinations; their singularities, therefore, are only blameable, when they have imprudently or morosely withdrawn themselves from the world; but there are others, who have, without any necessity, nursed up this habit in their minds, by making implicit submissiveness the condition of their favour, and suffering none to approach them, but those who never speak but to applaud, or move but to obey.

He that gives himself up to his own fancy, and converses with none but such as he hires to lull him on the down of absolute authority, to soothe him with obsequiousness, and regale him with flattery, soon grows too slothful for the labour of contest, too tender for the asperity of contradiction, and too delicate for the coarseness of truth; a little opposition offends, a little restraint enrages, and a little difficulty perplexes him; having been accustomed to see every thing give way to his humour, he soon forgets his own littleness, and expects to find the world rolling at his beck, and all mankind employed to accommodate and delight him.

Tetrica had a large fortune bequeathed to her by an aunt, which made her very early independent, and placed her in a state of superiority to all about her. Having no superfluity of understanding, she was soon intoxicated by the flatteries of her maid, who informed her that ladies, such as she, had nothing to do but to take pleasure their own way; that she wanted nothing from others, and had therefore no reason to value their opinion; that money was every thing; and that they who thought themselves ill treated, should look for better usage among their equals.

Warm with these generous sentiments, Tetrica came forth into the world, in which she endeavoured to force respect by haughtiness of mien and vehemence of language; but having neither birth, beauty, nor wit, in any uncommon degree, she suffered such mortification from those who thought themselves at liberty to return her insults, as reduced her turbulence to cooler malignity, and taught her to practice her arts of vexation only where she might hope to tyrannize without resistance. She continued from her twentieth to her fifty-fifth year to torment all her inferiors with so much diligence, that she has formed a principle of disapprobation, and finds in every place something to grate her mind, and disturb her quiet.

If she takes the air, she is offended with the heat or cold, the glare of the sun, or the gloom of the clouds; if she makes a visit, the room in which she is to be received, is too light, or too dark, or furnished with something which she cannot see without aversion. Her tea is never of the right sort; the figures on the China give her disgust. Where there are children, she hates the gabble of brats; where there are none, she cannot bear a place without some cheerfulness and rattle If many servants are kept in a house, she never fails to tell how lord Lavish was ruined by a numerous retinue; if few, she relates the story of a miser that made his company wait on themselves. She quarrelled with one family, because she had an unpleasant view from their windows; with another, because the squirrel leaped within two yards of her; and with a third, because she could not bear the noise of the parrot.

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[*] Statii Sylv., Lib. 1. Syl. 3. v. 37. Lib. 1. Syl. 5. v. 59, compare with the latter passage, Martial, Lib. vi. Ep. 42, and Plin. Epist. Lib. 5. Epist. 6. The tubes connecting the vessels which contained hot, tepid, and cold water, were sometimes of silver. Stat. Syl. Lib. i. Syl. 5. v. 47. Seneca, Epist. 86. From these authors, a very high idea will be formed of the luxury and magnificence of the baths, in the houses of rich individuals. Hanging baths (balnea pensilia) were invented by the same person who first taught the Romans to fatten oysters in beds.—Plin. Nat. Hist. Lib. ix. c. 54.

[†] Minucius Felix, sub init.

Of milliners and mantua-makers she is the proverbial torment. She compels them to alter their work, then to unmake it, and contrive it after another fashion; then changes her mind, and likes it better as it was at first; then will have a small improvement. Thus she proceeds till no profit can recompense the vexation; they at last leave the clothes at her house, and refuse to serve her. Her maid, the only being that can endure her tyranny, professes to take her own course, and hear her mistress talk; it can be borne only when it is despised. Such is the consequence of peevishness.

It sometimes happens that too close an attention to minute exactness, or a too rigorous habit of examining every thing by the standard of perfection, vitiates the temper, rather than improves the understanding, and teaches the mind to discern faults with unhappy penetration. It is incident, likewise to men of vigorous imagination, to please themselves too much with futurities, and to fret because those expectations are disappointed, which should never have been formed. Knowledge and genius are often enemies to quiet, by suggesting ideas of excellence, which men and the performances of men cannot attain. But let no man rashly determine, that his unwillingness to be pleased is a proof of understanding, unless his superiority appears from less doubtful evidence; for though peevishness may sometimes justly boast its descent from learning or from wit, it is much oftener of base extraction, the child of vanity, and nursling of ignorance.

[*Rambler.*

SPORTING OLIO.

ON DOG BREAKING.

(*Concluded from the American Farmer, page* 376.)

A young dog should be kept regularly to his work, if possible, until he become quite staunch. Great care should be taken with him the first season he is shot over, as it seldom fails to determine his worth: at this period, numbers of otherwise valuable dogs are ruined by improper treatment, particularly by ignorant, passionate game-keepers and dog-breakers; no fault, however, should be allowed to escape correction or *reproof.* I do not mean that the dog should be flogged for every trivial mistake, but that the most trifling error should be noticed by sounds or symptoms of displeasure; and, proceeding in this way, you should administer correction according to the degree of crime.

We will suppose the young dog broke, and taken out to put into effectual practice all his previous instruction. On the first shot, particularly if the dog see the bird fall, he will be very apt to break away; in which case he should be brought back to the spot whence he had run, and there, making him lie down, call out, *down-charge!* He should be compelled to remain in that position till the gun is reloaded; and the disposition and temper of the animal must be the rule or guide of correction. A well-bred dog will generally become perfect in this lesson in a very short period.

It sometimes happens, however, that a young dog will testify every symptom of alarm on the firing of the fowling-piece; will, perhaps, run home, and be with difficulty brought again to the field. When this occurs, I consider it a very unfortunate circumstance, as it will frequently require no ordinary pains to free the dog from this unnecessary fear. There is no better mode of effectually remedying the evil, than by convincing the animal that the discharge of the fowling-piece is intended for a very different purpose than to create alarm. He must, therefore, be brought back, and compelled to remain in company with the sportsman; he must, in fact, be led in a cord, to prevent his running away again; and if an attendant be not in the field, the sportsman may tie the cord round his own body. A few birds should be killed over him as quickly as possible, which should be shown to him, and he should be allowed to mouth them, if he appears inclined to do so: if a bird happen to be winged, he should be coaxed to foot it; thus he will very soon comprehend the true intention of the fowling piece; his fears will subside, and he will shortly manifest as much anxious joyful expectation at the sight and sound of a gun, as he previously testified alarm and terror.

Some persons accustom their young dogs to the report of fire arms at a much earlier period than when taken into the field; in fact, when they are very young. Certainly, if they endure the report of a gun or a pistol at this early period, there can be little dread of their taking alarm when brought into the field; but if a very young dog or whelp takes fright on the report of a pistol or gun, his fears will become so rooted that much greater difficulty will arise in completing his education than in the case I have before stated. In fact, all firing of guns or pistols near him should be cautiously avoided, as a practice of this sort will but increase his alarm, unless, indeed, it were daily, and almost incessantly resorted to. The dog must be regularly broke, and, when taken into the field with the fowling-piece, treated in the manner I have described above. It is highly important to convince the dog that the fowling piece is for the purpose of killing the game, which he is to find; and this cannot be done when shooting merely to accustom him to the sound, as no object is thus placed before him. For the same reason, I do not strongly recommend the practice of teaching dogs, when very young, to crouch in the lanes, &c. when you happen to be walking out, as the animal cannot be thus aware of the ultimate intention of his master, or conscious of the object for which he is compelled to become prostrate: this method, in fact, teaches the dog to crouch too much, and on that account I never practise it, or, in other words, force my pointers to endure such abject and unmeaning servitude.

Having thus gone, as plainly as possible, through what, for the sake of distinction, I will call the *regular rules* of dog-breaking, I will finish this long essay by a few desultory or general remarks, which will, I trust, be equally useful, and, at the same time, serve the purpose of collateral illustration.

In the first place, then, I would advise gentlemen *to break their own dogs,* wherever such a plan is easily practicable and agreeable to the taste of the sportsman. Dogs thus broke, and never suffered to go out but in company with the person who trained them, will infallibly be superior to all others. They are thus accustomed to obey one person only; they become perfectly familiar with his mode and manner, and, after being shot over one season, never afterwards give the least trouble. If dogs are lent from one to another, or become subject to many masters, they cannot be expected to be perfect. For instance, I will suppose I have trained a dog; have shot over him for several seasons, and he has, at length, become perfectly master of his business: I lend him to a friend for one day, as good a sportsman, too, as myself: the dog, on being taken into the field, and perceiving a stranger, is unwilling to acknowledge his authority: the mode and manner of my friend, too, are different from mine, and, consequently, unlike that which the dog has been accustomed to; in fact, the sportsman and the dog do not perfectly understand each other, and a quarrel ensues: the sportsman succeeds, perhaps, in reducing the dog to obedience; but the latter returns home, in some measure, a different animal: he has committed various mistakes in the course of the day, perhaps, and, on next going into the field, his own master will not fail to perceive that his dog is not the same, but requires, in some degree, training anew.

The less a dog is spoken, or whistled to, the better. Whenever a wave of the hand or a motion will answer the purpose, the silent signal is to be preferred to noise; and those who are well acquainted with grouse-shooting will feel the force and propriety of this remark. I have often been surprised at the distance at which the human voice, in common conversation, may be heard on the moors, down the wind: grouse will bear noise less than any other game.

A well-bred pointer seldom requires excessive correction. *Setters*, on the contrary, are more unruly; and, generally speaking, render severe and frequent flogging indispensable; they are, however, valuable where plenty of employment can be given; but, where incessant labour is not called for, the pointer is far preferable. However, no dog should be corrected in a passion; nor, after being flogged, should he ever be suffered to run away or leave the sportsman, till he and the dog become reconciled to each other. I have seen foolish, passionate men let their dogs run away immediately the flogging is over, and aim another blow at them as they are going away. Nothing can be more censurable, for, when the dog next commits a mistake, and you wish to chastise him, he will not suffer you to approach sufficiently near to lay hold of him. Therefore, after correction, he should not be suffered to move, till by a word or two of caution, spoken in a mild tone, his alarm is dissipated. If a dog, either from strength or disposition, becomes difficult to chastise, by first tying his legs together, the sportsman will have a perfect command over him.

The best dogs may sometimes make mistakes—on bad scenting days, for instance; or if they happen to run down wind, particularly if it is blowing strong. On such occasions, it would be cruel to flog them, though the words expressive of caution may be used, spoken in an angry tone.

Well-bred pointers, as I have before observed, if taken into the field at a proper period, will, in general, require little breaking; they will often point and back of themselves, and, in fact, give the sportsman much satisfaction with little trouble.

The dog that first finds the game should always go up to it; and on no account should another be suffered to pass or run before him. It is like snatching his well-earned reward, to say nothing of the confusion which must ensue from such a culpable practice.

I have seen dogs shot at for the purpose of rendering them steady, and particularly to prevent them from chasing hares; I cannot say I admire this method, though I have seen it used with effect: it can only be had recourse to with hardy, headstrong animals; as to shoot at a young, timid dog, is to ruin him at once. It is a dangerous method at best, nor should it ever be resorted to, but when the dog is at a considerable distance.

A pointer or setter should never be named *Carlo, Sancho*, or, indeed, any name ending in *o*, as the word *toho* is so frequently indispensable, and, ending in the same sound, is apt to cause misunderstanding and confusion. A dog's name should consist of one expressive syllable, which comes forcibly from the mouth; such as *Nell,* for instance—and where more than one dog is used, their names should sound as differently as possible.

It but too frequently happens that young dogs manifest an inclination to *hunt and worry sheep*, which must be instantly corrected. If a severe flogging have not the desired effect, the dog should either be tied to a strong ram, leaving a sufficient length of cord to allow the ram to make a run; or they should be confined together in a barn or some building. Flog the dog till he cries out, making use of the words '*ware sheep!*' The ram will not fail to commence a furious attack upon him, and will butt him most violently. They should be kept together for twenty minutes; the ram will not fail to continue his butting, and it may not be amiss to flog the dog several times during this period, making use of the words just mentioned at the same time. This will, most likely, prevent the dog ever looking at sheep afterwards, unless, perhaps, where he has absolutely bitten them before this system of correction was put in practice; in which case, I am not aware of any mode of punishment or correction that can be depended on; for, although the dog may not even notice sheep in your presence, yet he will, nevertheless, be very apt to steal away, as opportunity may offer, for the purpose of depredation: when once dogs have *tasted mutton*, they are never to be trusted. Indeed, I have seen an instance or two, where the dog, after being a little butted, has fiercely turned upon the ram, which he would have torn to pieces had he not been prevented; but a circumstance of this sort rarely occurs, and in the instances to which I allude, the dogs were grown rather too old to be cured by this or any other mode short of confinement or death. If a young dog look earnestly at, or set, a sheep, he should be corrected; and, if you find him repeat it, have recourse to the ram, as by far the most effectual mode that can be adopted. A dog should be corrected, in fact, the moment he is observed to manifest the slightest inclination even to notice sheep; as he will, if not checked, first look and set, then chase, and ultimately worry them.

As to poultry, the evil is not of so much magnitude, nor the disposition to worry it so difficult to subdue, as when sheep are the object; besides, poultry, being generally about the house or premises, afford better, as well as more frequent opportunities of observation. Young pointers are very apt to make their first essay, as it were, by worrying chickens, or pigeons, where they happen to be very tame. Early and severe flogging will, however, generally remedy the evil: if not, tie a fowl (a living one is the best, on account of its fluttering,) to the dog's tail, and tie it in such a manner, either by a cleft stick or otherwise, that it may give the dog considerable pain. Take him to a place some distance from his kennel, and after giving him a few smart strokes with the whip, let him loose, and he will seldom fail to run home, howling all the way, (just as if a tin kettle were tied to him,) and terrified beyond measure. He should, however, be followed, dragged from the farther end of his kennel, in which he will, no doubt, endeavour to hide himself, and be again well flogged; and the fowl, being taken from his tail, should be buffetted about his head.

I have met with sportsmen who teach their pointers to fetch the dead bird. I must confess I am not fond of this method, as the dog, thus accustomed to fetch the bird, is very apt to break away on the shot, whether a bird be killed or not.

Rusticus.

Curious Wager.

A gentleman farmer, of Norfolk, who had engaged for a wager of 20 sovereigns, to ride his boar pig from his own house to Wisbeach, which is four miles and a quarter, in *one hour* performed the same in 50 minutes.

THE FARMER.

Baltimore, Friday, February 17, 1826.

☞The Editor has received a Ram and two Ewes of the genuine New Leicester breed, from Charles Champion, Esq. of England, prints of whose sheep of the same breed have been seen by the Editor's friends, over the mantle in his library; an impression from the same plate is in the library of the Philadelphia Agricultural Society. The sire of these sheep was *let* for 100 guineas for a single season. Their coming now, is the effect of measures taken before the exportation of sheep from England was lawful, else the Editor would have saved himself the trouble and expense of importing them. The weight of the four sheep, from the Farmer and of the stock from which these are derived, and represented in the print above mentioned, was

Nett weight of carcass, including the head—	
	180½ *lbs.*
	171
	161
	159
Total London weight,	671½
Average weight of each,	168 *lbs.*

They are all in fine condition, and the Ewes are in lamb by Mr. Champion's best Ram. They are for the use of the country, and not our own.

Tobacco Seed.—For those to whom the information is desirable, it is stated, that Sinclair & Moore have for sale, the Burley or Fowler tobacco seed, at $3 per lb. The pear tree ditto, at $3 per lb.

INQUIRY RESPECTING A CURE FOR THE CANCER.

Sir, *Somerville, N. J., Feb. 9, 1826.*

In volume 6, No. 44, page 352, of the American Farmer, I observed a recipe for the cure of a cancer. The recipe was taken from the Petersburg Intelligencer. The experiment was effected on a son of Mr. Carter Harrison, of Prince George's county, by the use of narrow-leaf dock weed. I should like to know, particularly, how the root was applied?—Whether any part was taken inwardly?—How long before the cure was effected?—and, in what stage of the disease was the root applied?

Respectfully, yours,

PETER Z. ELMENDORF.

WANTED,

A good experienced Gardener, to superintend a market garden—he must be honest, sober and industrious. I have no objections to a man with a wife, but they must not have children, or if any none large enough to pull fruit. One who understands the management of fruit trees, would be preferred. JOHN COX.

Georgetown, Jan. 29.

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Extract from the Memoirs of Josiah Quincy, Jr.—Chinese Agriculture, extracts from the Travels of a Philosopher—Sheep, owned and kept in Washington county, Pennsylvania—Scientific Memoranda, applicable to rural economy, Lime, its use in making Soap—James Worth, on the Diseases of Fruit Trees—Thomas Emory, on Fruit Trees—History of Ancient and Modern Wines, by Alexander Henderson, M. D., continued—Bees—Great Product from the Bees of Mr. Ezra Williams—Peevishness, equally wretched and offensive—On Dog-breaking, concluded from p. 376—Curious Wager—Importation of fine New Leicester sheep by the Editor—Inquiry respecting a cure for the Cancer, by P. Z. Elmendorf—Advertisement.

PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50			
BACON, and Hams, . .	lb.	7	10		
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java, ...	—	18		22	25
Havana, ...	—	15	17	18	20
COTTON, Louisiana, &c.	—	16	18		
Georgia Upland, . . .	—	14	14½		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12½		14	16
Dipt, ...	—	10	11	11	12½
CHEESE, ...	—	8	10	1.	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90	95		
FLOUR, Superfine, city,	bbl.	4 50	4 62	5 50	6 75
Fine, ...	—	4	4 25		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	55	60	62	65
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	75	92		
do. Red, ...	—	90			
do. White Flint, . .	—	2 00			
Rye, ...	—	55	58		
Barley, ...	—	90	95		
Clover Seed, Red . .	bush	4 50		5	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	—	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	40		45	
Beans, White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	30	37	50
HOGS' LARD, ...	—	9	9 50	12	
LEATHER, Soal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45		62	75
Havana, 1st qual. . .	—	30	31	37½	
MEAL, Corn, kiln dried,	bbl	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	2 06			
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2 00	2 12		
OIL, Whale, common, .	gal.	30		40	50
Spermaceti, winter .	—	73	75	88	1 00
PORK, Baltimore Mess,	bbl	13 00			
do. Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	5 75			
RICE, fresh, ...	lb.	3	3½	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5½	7	8	12
WHISKEY, 1st proof, .	gal.	24½	26½	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	
APPLE BRANDY, 1st pr	—	35	37	50	
SUGARS, Havana White,	c.lb.	13 50		15	16
do. Brown, . .	—	10	10 50		
Louisiana, ...	—	8 50	9 75	10	11
Loaf, ...	lb.	19	22	20	23
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	80		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	17½	18	25	
SALT, St. Ubes, ...	bush	46	48		
Liverpool Blown . .	—	53	55	75	
SHOT, Balt. all sizes, .	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 30	2 00	
Lisbon, ...	—	1 15	1 25	1 50	1 75
Claret, ...	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common Country, .	—	25			
Skinners' or Pulled,	—	33	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by John D. Toy, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

SHEEP.

Mr. Editor,

Possibly the following Extracts on Sheep Husbandry, may assist some of your correspondents who are wool-gathering.

I am, sir, your obed't serv't,
CURWEN.

—

Jonathan Roberts, Esquire,
President of the Pennsylvania Agricultural Society:

Dear Sir,

I have made some selections for the use of the Society, which as they exhibit the best European practices, illustrated by the sagacious remarks of an agriculturist, distinguished alike by philosophical research, and practical skill, may tend to correct our modes of management, and to silence the crude suggestions, of unskilful, and speculative men.

I am your obed't serv't,
JOHN HARE POWEL

Selections for the Pennsylvania Agricultural Society.

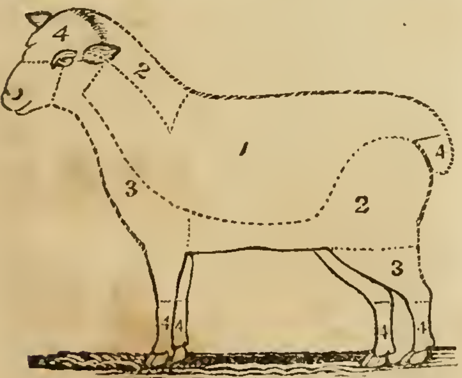
Extracts from Dr. Parry s Essay on the Nature, Produce, Origin, and Extension of the Merino breed of Sheep.

Merino sheep in Saxony, France, and Spain; "Merinoes rarely eaten;" Their Form; Quality and weight of Fleece; Difference of Flocks; Equality of Wool in different parts of the Fleece; Shearing, Sorting, and Washing the Wool; their Management. Food, &c. in various countries; the advantages of crossing, and improvement of the Wool by attention to Form. New Leicesters "fit for the manufacture of soap and candles."

"It is generally believed in Spain, that the salt contributes not only to the health of the animal, but to the weight and fineness of the fleece.

Wool—Sorting.

"Soon after the shearing of the Merino sheep, another important operation takes place, which is that of sorting the wool. This among the Spaniards, as with us, is a distinct business, to which it is required that the workmen serve an apprenticeship of five years.



The wool is divided into four parts. The first, which is called by the Spaniards Floreta, or Refina, and by the French Laine-mère, is taken from the flanks, the back as far as to the tail, the shoulders, and sides of the neck. The second, or Fina, comprises the wool of the top of the neck, the haunches, as far as the line of the belly, and the belly itself. The third, Tercera. is that of the jaws, the throat, the breast, the fore thighs to the knees, and the hinder thighs, from the line of the belly, down to the hocks. The fourth, or Cahidas, is that below the hocks, between the thighs, the tail, the buttocks, the pole, and behind the ears; and all that which shakes out of the fleece in shearing, or in washing. In the drawing which I annex from Lasteyrie, the parts of the sheep which furnish the wool of these respective qualities; are included within the corresponding lines, and indicated by the figures, 1, 2, 3, and 4.

A set of bags, containing the whole of the three first sorts of a certain number of fleeces, is called Pila, or a pile, and each bag is marked with the initial of the name, which expresses the quality of its contained wool. R F. or T. The profit arising from the sale of the fourth sort, or cahidas, which is marked C. or K., is allotted for the consolation of souls in purgatory; an end, to which no great aid is contributed by the merchants of England.

As soon as the wool is sorted, it is reduced, by washing in hot water, to the state in which it is usually imported into this country. This process being very important to the interests of the grower of fine wool in England, I shall relate it at large hereafter, with such improvements as have been made in it by the superior energy and chemical knowledge of the French."

Shearing and use of Salt.

"The Swedes consider salt as very wholesome for sheep. They allow it them chiefly in damp or rainy weather, occasionally mixing with it wormwood, and other bitter plants, juniper berries, and even tar. The plants and berries are powdered, mixed in water with the tar and salt, and put into troughs, across which are nailed, at proper intervals, branches of fir, in order to prevent the sheep from jumping in or soiling themselves.

The shearing takes place about the beginning of July; previously to which the sheep are washed, by some in running water, by others in buckets of warm water, mixed with a small quantity of alkaline lye, and of urine; after which they are rinsed with clean water. Two or three days, or more, are suffered to elapse before shearing, in order that the wool may dry, and become soft by a fresh rise of the yolk. The average weight of the well washed ewes' fleeces seems to be full three pounds, and of the lambs' fleeces one pound."

Introduction of Merinoes into Saxony.

"In the year 1765, Augustus Frederick, Elector of Saxony, introduced into his dominions from Spain 100 rams and 200 ewes, chosen from the most noted flocks. Part of these were established at the Electoral farm at Stolpen, on the frontiers of Bohemia, six leagues from Dresden. Three other secondary sheep farms were instituted, at Rennersdorf, Lohm, and Hohenstein, in order chiefly to improve the native breeds by the Spanish cross. At the end of ten years, these establishments were found to have had all possible success. The sheep of the pure blood had preserved every valuable quality, and the ultimate crosses had wool fully equal in fineness and beauty, to that of the pure Merinoes.

In 1776, they began to offer some of these sheep for sale. But as, at this period, they found many difficulties, the government obliged the tenants of the electoral lands, to buy a certain number of the Spanish sheep. The demand for them soon increased to such degree, that in 1778, it became necessary to make a new importation from Spain, to the amount of 100 rams and 200 ewes. The flocks of Stolpen, and the three others above mentioned, have been successively augmented, so that, according to Lasteyrie, the pure Merinoes belonging to the Elector, amounted in 1802, to 3400; and 500 of this flock annually disposed of by public sale, are insufficient for the demands of the farmers, notwithstanding the addition of those which are easily procured from private individuals.

The sheep of these flocks are larger or smaller, and yield more or less wool, according to the nourishment which is given them, and the mode in which they are treated. On the whole, they are smaller and less productive, than the original ones in Spain. The Saxon government, aware of this, has established public schools for shepherds, and distributed among the country people several publications, containing useful instructions for the treatment of sheep."

Merinoes—Winter management in Saxony.

"The winter food of the Saxon Merinoes consists of hay, lattermath, clover, oat or rye straw, haulm of peas, vetches, lentils, &c. which are distributed twice or thrice a day, according to their quality. Some cultivators give oil cake, and bran or corn bruised, or ground into meal They mix these articles in a tub with the water which they give the sheep to drink, and afterwards divide among them the more substantial sediment. This mixture, which they find singularly beneficial to the lambs, should be made with hot water; and seven or eight pounds of cake or meal are divided among 100 sheep. When they have no good fodder, or the snow continues very long, they give the sheep corn in the straw, or even by itself; but as the latter food is expensive, they usually substitute beet root, turnips, carrots, and more especially potatoes. They collect with great care the horse chestnut, which they begin to give in the autumn, as soon as the grass fails, allowing each sheep about 14 lb. of the nut and its thorny husk, which they cut in pieces together. Sheep as well as cows, refuse this sort of nourishment at first, but come, at length, to eat it very greedily. When the weather will permit, and the snow is not too deep, they send the sheep into the woods, and on the dry heaths; but those who have no winter pastures, keep their sheep in the house from the beginning of December till the beginning of April, taking care to give them as much air as possible within, and to send them out, for the same purpose, three or four hours every day. Some persons, through defect of pasture, also keep them in the houses the whole summer; and, if they allow them plenty of air and good nourishment, do not find this mode of treatment prejudicial either to their health, or the fineness of their wool.

It seems as if, even in summer, the whole flock was housed at night; and they are not sent out into the pastures till after the dew is dissipated. They are kept within in thick fogs, in hard rains, and after hail storms. Water is given them every day.

Salt is generally distributed to these sheep by the Saxons, who think that it contributes alike to their health, and the fineness of their fleeces. They either mingle it with their forage, or dissolve it with their drink. Sometimes it is mixed with hay seed, millefoil, bitter plants, and a small quantity of wood ashes. It is given chiefly in the summer, and dry weather; but it is discontinued to the ewes four or five weeks before lambing time, from a belief that the thirst which it occasions causes them to drink so much water, as to obstruct their yeaning, and that their relish for it makes them neglect to lick their new-born lambs."

Saxon mode—Yeaning and Weaning.

"The lambs fall before March, and are weaned in June. With some few exceptions, they are not allowed to accompany their dams to the pastures before that time. Some persons even keep them in the house till autumn; and others during the whole of the first year. But then, they give them there plenty of hay, lattermath, peas haulm, bruised oats, or peas, &c. They are thus imprisoned with a view, it is said, of securing them from giddiness. If any ewe has twins, one of them only is suffered to suck her, and the other is put to a she goat. It is said that the milk of this animal is peculiarly nourishing to weak and sick lambs, for which purpose goats are kept in some flocks."

Saxon mode—Shearing.

"The sheep are washed before shearing in running water, two successive days; on the morning of the first day and on the morning and noon of the second. They are suffered to dry for two days, and are shorn on the third. The time of shearing is the beginning of May. When the skin is accidentally cut, the wound is rubbed with sheeps' dung, or with a mixture of linseed oil and resin. Both practices are probably intended to guard against the fly.

Saxony no longer imports Spanish wool. It is supposed to contain between 90 and 100 thousand fine-woolled sheep; each producing, on an average, 2¼ pounds of washed wool; altogether 247,500 pounds, or upwards of 1031 packs of 240 pounds each. At least half of this quantity is sent from the Leipsic fairs to various parts of Europe.

A good deal of this wool has of late been imported into England. Till the present year, it came in a very foul and rough state, being probably, as Lasteyrie says, not sorted as in Spain, but only freed from that part which was soiled by the excrements. Hence it wasted in scouring, from five to six pounds in twenty. This year, however, it has come much more nicely sorted, neatly packed, and washed in some improved method. It is now generally agreed by the manufacturers who have tried this wool, that it makes cloth superior in softness and fineness to any which can be obtained from the very best Spanish piles."

Merinoes—Introduction into France—Management.

"In the year 1786, according to Lasteyrie, or in 1785, according to Bourgoing, who asserts that they were obtained through his mediation, 367 Merino sheep were presented by the king of Spain to Louis the Sixteenth. During their journey 60 died, and within a few weeks after their arrival at Rambouillet, 35 ewes and 60 lambs fell a sacrifice to a febrile disease, accompanied with pustules, and which, as I have before remarked, is unknown, I believe in England, called by the French, Claveau. Clavellée, and sometimes Pourriture.

These sheep, having been chosen for their forms, and fineness of fleece from various Spanish flocks, differed extremely as to their size and shape; but, being properly associated after their arrival in France, produced a race unlike any of the original breeds, but equal to the best of them in [illegible] and fineness of wool; and, as it will hereafter appear, superior in weight of carcass and of fleece."

(To be continued.)

SHEEP—SILK-WORM—INDIGO, &c.

[Valuable suggestions, on a variety of subjects, being an extract from a letter dated January 11, 1826, and addressed to J. S. Skinner, Editor of the American Farmer, at Baltimore, by William Partridge, of New York, author of a very valuable "Practical Treatise on Dying of Woollen, Cotton and Skein Silk, the Manufacturing of Broad cloth and Cassimere, including the most Improved Methods pursued in the West of England, in which the various Manipulations are accurately delineated, also, a correct description of Sulphuring Woollens, and Chemical Bleaching of Cottons."]

Dear Sir, *New York, Jan. 11, 1826.*

Yours of the 7th inst. was received in due course. I should be pleased to give any information in my power on sheep and wool. The former I have very little knowledge of, the latter, as a woollen manufacturer, I profess to have a little more, and I assure you it is but little. You will find some notice of wool in my work, under the head "choice and properties of wool." I expect you noticed an article relative to the different effects in manufacturing of Spanish and French wool, from Saxony and American, in the Statesman, which appeared about two weeks since. Spanish, French, Saxony and American sheep, are all originally from the same animal. The Spanish and French will make a firm grounded cloth; the Saxony and American, when made into cloth, is always of a loose, spongy texture. This difference has been often complained of by our manufacturers, and after a late conversation with one of our manufacturers I took the subject into consideration, and the result was the opinion given in the Statesman above referred to. With respect to the formation of wool, we know but little of it, being one of those inexplicable organizations beyond our capacity to reach; but that wool is altogether composed of animal oil there can be no doubt, for the whole will dissolve in caustic alkalies, forming a soap, like other oleaginous matter. It would appear that the softest and finest wool has in it a much greater portion of this oil than coarse wool. This oil, by some process unknown to us, becomes organized wool. That which is called yolk by the manufacturer is nothing more than the oil of the animal hardened by exposure, and no doubt oxydized: it is highly probable that this is a preparatory process to the organization of the oil. The Saxon sheep are covered with coarse cloth (jacketted,) during the winter season, which is said much to improve the quality of that wool. This may be necessary in Saxony and not in Spain, the former being considerably north of the latter. The Spaniards drive their sheep to the mountains during the summer months, and keep them in warm vallies during the winter. I think it probable that wool does not organize as completely either in extreme hot weather, or in very cold weather: experience points out to us, however, that in those climates where the weather is regularly hot all the year round, the wool approximates to hair. It is certain, therefore, that temperate climates are the best for growing wool. The best wool I have seen raised in this country has been from the state of Ohio; and I consider Kentucky, Ohio, Tennessee, Indiana and Illinois, to be the states best adapted for fine woolled sheep. I have very little doubt that in a few years these states will export many millions of dollars worth of fine and coarse wool.

America does not raise at this time more than half the wool that is used in the country. I have known an agent for a Saxony house in this city, to sell $75,000 worth of wool in one month; and there was disposed of by auction, at one sale, very recently, nearly four hundred bags of Saxony, Spanish, and Portuguese wools. Our manufactures of woollens are increasing with a rapidity unexampled in other nations. One factory at Framingham, Massachusetts, will make 500 yards of broad cloth and cassimere per diem by next July; and several others nearly as extensive, are in progress in the Eastern states. Our merchants have found, to their cost, that capital is neither so safe nor so productive when vested in commerce, as in manufactures. It is very strange that our merchants cannot be made to believe that manufactures are promotive of commerce, having the example of Great Britain before their eyes, who exports no raw material, and who is enabled from the products of her manufactures alone to import more than any other three nations on the globe. Our merchants have, since a general peace in Europe, had a dreadful crisis every six or seven years, and this will regularly be the effect so long as they continue to import so much more than they export, for there must come a period when the balance will have to be paid, either in money or by bankruptcies. It is true that the extent of imports is the best criterion of a nation's prosperity; but the limit of exports is the limit of imports, beyond which no nation can go for any length of time with impunity; and it is this excess of imports which produces that periodical crisis so ruinous to our mercantile community. By the report of the Secretary of the Treasury, our exports of manufactures were rising of $6,000,000 last year, and should nothing check their progress, we shall soon have an increased and healthful commerce.

I have but little knowledge of the vine and the silk-worm; but am much pleased to find our southern neighbours are turning their attention to these agricultural products. When last in England, I had little to occupy my attention; and when I eat or drank any thing of domestic manufacture, I took recipes. Almost every family there make more or less of made wines, and I have nearly one hundred and fifty recipes for compounding such liquors, many of them equal to foreign wines. The white garden currant is very fine, much superior to the red. The quince is of exquisite flavour. I tasted of thirty six different kinds in one family near Oxford, and took all their recipes.

My attention for the last five years has been devoted to the improvement of the woollen manufacture, and to the dying. From the flattering testimonials received from many of our first manufacturers, and the evident improvement in this branch of industry since my work and essays have been published, I flatter myself that my efforts have not been in vain. Much, however, remains to be done, and many agricultural products have to be raised here to which little attention has yet been paid. We are still importing weld, madder, woad and indigo, all of which could be as well grown in this country as in any other, when our farmers shall make themselves acquainted with the mode of raising and manufacturing them. There cannot be less than 200 tons of madder sold in this city alone, per annum, and it grows well in Kentucky and the middle states. It is four years after planting before it is fit for use, and this will be the principal obstacle to its introduction, as our farmers have been accustomed to raise such crops only as make annual returns.

Indigo, from its great value and general consumption, is an object of primary importance—and should my life be spared for a few years, I shall not despair of giving to this country the means of supplying the whole of Europe with the article. The present mode of making indigo is not the best. It has been long known that the Africans produce from the indigo plant, worked up in a very simple state, a colour very superior to any thing produced in England. We are not acquainted with their mode of dying, but we know that the leaves of the plant are made into balls, and that with these they colour. Before indigo was introduced into Europe, the woad plant alone was used for dying their blues, and their colours were more permanent then than they now are. I have discovered a mode of dying a fine and permanent blue with the indigo plant alone, and have secured a patent for the discovery. In making indigo they are obliged to ferment the plants in order to extract the colouring fecula, they then draw off the liquor and oxydize it, when it precipitates, and this precipitate is the colouring matter called indigo. When the dyer uses it, he grinds it and ferments it with woad, or some other expensive material, to bring it back to a green state, in which state alone the colour is permanent. In my process the indigo plant will be worked in a very simple state, and will answer for both woad and indigo, by which means one half the present expense of dying will be saved. Every thing indicates that this country must take the lead in commerce, agriculture and manufactures. The variety of climate and soil, the freedom of our institutions, which leaves the human mind free to act, the immense in ternal communications, and the late discoveries of extensive coal formations, together with our inexhaustible water power, all indicate that nothing but enterprise and industry is wanting to make it the greatest and richest country in the world.

Yours, truly,
WM. PARTRIDGE.

FOR THE AMERICAN FARMER.

SCIENTIFIC MEMORANDA—APPLICABLE TO RURAL ECONOMY.

(Continued from p. 378.)

On Preserving Fruit Trees from Frost.

M. Bienenbugh, of Leignitz, in Silesia, has improved on the plan some years since announced, of saving fruit trees from the effects of late frosts. He takes ropes made of straw or hemp, with which he envelopes the trees, the ends of the ropes being put into, and reaching the bottom of a vessel filled with spring water. A single vessel suffices for many trees, by winding the same rope, or many united ropes, around all of them, and placing the two ends in the vessel. The vessel should be four or five yards distant from the trees, taking care that the branches do not touch the ice upon the surface of the water. This singular preservative has been proved in Prussia, Poland, and other places, with success, and is recommended particularly for apricots, which, blossoming early, are more exposed to injury. See *Bibliotheque Physico-Economique*, 1819.

Burnt Clay.

The British Society for the encouragement of Arts, Manufactures and Commerce, awarded, in 1819, their gold medal to the Rev Edward Cartwright, for his experiments on the efficacy of burnt clay as a manure. The experiments were made with soot, at the rate of 50 bushels the acre, and wood ashes, at the rate of 100 bushels the acre. Burnt clay was used at the rate of 20 cart loads (20 bushels each,) to the acre. The whole was applied as top-dressings to a cold, wet, tenacious clay, a soil of all others most likely to be benefited by the mechanical operation of burnt clay. The product of square yards under each dressing, is stated below:

Swedish Turnips.

			tons.	*cwt.*	*lbs.*
Burned clay, . .	580	per acre,	25	2	20
Soot, ...	546	"	23	12	2
Wood ashes, . .	398	"	16	12	52
No top dressing,	235	"	10	3	12

Potatoes.

	bushels.	*pecks.*		
Burned clay, ...	5	00	per acre,	480
Soot, ...	4	3	"	456
Wood ashes, ...	4	2	"	432
No top dressing, ...	4	00	"	340

Kohlrabi.

	lbs.		*tons.*	*cwt.*	*lbs.*
Burned clay, . .	160	per acre,	6	17	26
Soot, ...	138	"	6	18	32
Wood ashes, . .	114	"	4	17	30
No top dressing,	93	"	4	7	48

Barley.

	sheaves.	*bush.*	*pecks.*		*qrs.*	*bush.*
Burned clay, . .	126	4	2	per acre,	4	4
Soot, ... :	121	4	1	more than	4	2
Wood ashes, . .	117	4	1	less than	4	2
No top-dressing,	84	3	0		3	0

Much depends on the economy of burning the clay. The reverend experimenter states, that the burning of his cost 1*l.* 6*s.* 6*d.* ($5.89,) for 35 loads. A trench is dug (having sufficient fall to take off the water,) 20 feet in length, 3 deep and 3 wide. At the upper end of the trench, and resting on its sides, a brick arch is turned, 9 or 10 feet long, having openings for letting the fire through to the clay. These openings are made by leaving out half a brick at proper intervals. In the front of the arch is a small wall two bricks thick, which has its foundation in the bottom of the trench. This wall, which is two feet wider than the arch, rises about a foot above it, through which there is a mouth to the arch about two feet wide. The whole erection requires about 5 or 600 bricks, and no lime, except for the front wall. The arch will be best laid in loam or puddle of any kind. The lumps of clay are laid hollow upon this arch, that the fire may draw through freely. When the pile is about two feet thick upon the arch, the fire is lighted of faggots, and a sod wall made round the kiln, which may extend two feet wider than the arch, and three or four high. As the ignition proceeds, fresh clay is added by degrees, until the heap is between four and five feet high, and is burnt through, when the fire is suffered to go out. See *Rep. of Arts, 2d series, vol.* 36.

It is worthy of remark, that in Great Britain, the clergy take an active part in agricultural improvement, and that they form a large portion of the agricultural writers and experimentalists. They thus render themselves doubly useful to society.

A cure for the dry-rot in Timber,

Has been found in submersing timber in salt water; and the British Commissioners of the Admiralty have directed the submersion of ships, and timbers and planks, after they are prepared for ship-building, both as a cure and preventive of the dry-rot. See *Rep. of Arts, before quoted.*

Beet Sugar.

The manufacture of this article was begun in France during the revolution, when the sugar of the cane was not to be had, or only at an extravagant price. Count Chaptal persevered in the manufacture of this article, although the causes which prompted the first experiments ceased with the war; until he has rendered it a business of great profit. The sugar is found to differ in no respect from that of the cane. The culture of the beet is found to fit the soil for wheat; and the cake, after the extraction of the juice, is found to be equal to any green food for feeding and fattening cattle. We find an estimate of the expenses and product of the Count's manufactory in the *Annals de Chimie et de Physique*, as follows:

EXPENSES.

Tillage, sowing, weeding, &c. and expenses of all kinds, attending the extraction of the sugar, during 79 working days, . . *francs*	7000
Labour, ...	2075
Fuel, ...	4500
Animal charcoal for clarifying, . .	1100
Repairs, interest of the capital, &c. .	4000
francs	18,675

PRODUCT.

Raw sugar, being the first crystallization, *lbs.*	29,132
Sugar from the molasses, obtained by a second boiling, ...	10,960
Total of raw sugar, . . .	40,092

Besides 158,000 lbs. cake, which kept the Count's flock of Merinoes 78 days, and a large quantity of molasses, which, when fermented, yields much ardent spirit. •

COTTON PLANTER AND CULTIVATOR.

Dear Sir, *Eastville, Va., Feb.* 10, 1826.

Allow me to correct an error in the price of my Cotton Planter and Cultivator, as stated in your last number. It should have been *eighteen* dollars. In reply to "A Duck river Planter," I will observe, that I have lately seen the machine alluded to by him, and they bear not the smallest resemblance to each other. The public will judge which is preferable. There is one material difference. My machine deposits the seed at any regular distance required, while the other strews it along the row without intervals. Neither does it cultivate the cotton. I did not see it in operation.

Yours, respectfully,
F. H. SMITH.

QUANTITY OF COTTON SEED TO BE DEPOSITED IN ONE SPOT.

Dear Sir, *Edisto Island, Feb.* 4, 1826.

In answer to Mr. Smith's query, relative "to the proper quantity of cotton seed to be deposited in one spot," I would remark, that the quantity depends in a great measure on the manner in which the cotton is planted. One of the following methods, is the most prevalent; to wit:—1st. Holes are made the length of the hoe, with a space between them of about one foot; or secondly, the holes are 1½ feet in length, and distant from each other about 18 or 20 inches. When the first plan is adopted, the number of seeds in a hole is usually from 30 to 40, and double this number, if the holes are much longer. I must, however, be permitted distinctly to state, that we never deposite the seed "in one spot,"—they should occupy every part of the trench—It is a matter of primary moment, that cotton plants in every stage of their growth should never touch each other.

Respectfully,
Your obedient servant.
WHITEMARSH B. SEABROOK.

P. S. I must request Mr. Smith, so to construct the machine he is about to send me, as to deposite about 30 seeds in a hole.

BOAT BRIDGES AND AUSTRIAN COTTON.

Mr. Skinner, *South Carolina, Feb.* 4, 1826.

Having passed a tide-water bridge of boats at Rouen, and also having understood the Rhine is crossed at various places on such bridges, I am led to ask whether some of your correspondents could not give a reason why they should not be adopted in the United States?

Rees' Encyclopedia (Phil. edit. vol. 5, part 2d,) states "this branch of military science to have attained (in the campaigns of 1799, 1800,) that pinnacle of excellence which it will be difficult to surpass." It refers to Dedon's *Relation des Passages de la Limmat et du Rhin.* Paris 1801, 8vo.

Many years since (before 1808,) a M. Helbling published at Vienna "a *short* and much esteemed treatise on the culture of cotton." M. Helbling was the author of a *Hora Austriacis*, &c. To this gentleman, adds the writer who states the fact, "we are indebted for a knowledge of the various species of vines cultivated in the environs of Vienna."

Is this tract known in the United States? If not, can it be procured?

I am, sir, yours, &c.
Amphicon.

WOOL—INQUIRY.

It would gratify me to learn from Mr. McDowell what proportion of his wool brings him 80 cents? what he gets a pound for *all* his wool? what is the average weight of his fleeces? Also, how many years he has used Saxon bucks, and when, where and by whom they were imported?

A Connecticut Farmer.

HORTICULTURE.

CULTIVATION OF CRANBERRIES.

Montgomery county, Md. Feb. 10, 1826.

John S Skinner, Esq.

I recollect having seen it mentioned in the "American Farmer," two or three years ago, that attempts were making in England to cultivate the cranberry on high ground or upland, but with what success I have never understood. It is a most delicious and wholesome fruit, and if it could be raised in our latitude, could not fail of being considered a most valuable acquisition.

We know that the finest cranberries in the world, are grown in New England, and among the mountains in Alleghany county, in this state. I have also understood that small quantities have been raised by some families in the lower counties of our state. If they can be raised both north and south of us, I am at a loss to know why they would not succeed in our middle counties.

The object of this communication is to get the favor of some of your eastern correspondents or others acquainted with the cultivation of them, to give us through the medium of your valuable paper, such directions and information as to the most proper soil, best exposure, manner of procuring seed, preparation of the ground, time of sowing, and cultivation, as will enable us to make the experiment.

I am respectfully, yours, &c.

R. B. D.

From the Westminster Review—London.

HISTORY OF ANCIENT AND MODERN WINES.

By Alexander Henderson, M. D.

(Continued from page 382.)

In the climates of Greece and Italy, however, it was more agreeable, as well as more difficult, to have a supply of ice or snow for the purpose of cooling their wine. This practice, as well as the mode of preserving ice and snow, and of reducing the temperature of water by evaporation, the Greeks borrowed from the Orientals, and the Romans from the Greeks: the latter process is particularly described by Athenæus from Protagorides, as well as by Pliny and Galen, to whom Dr. Henderson refers: according to Protagorides, boys were employed all the night in keeping the outsides of the jars moist.[*] The coolness of the jars was preserved, as well as the ice and snow which they accumulated in pots kept undissolved, by a covering of straw, leaves, oak branches, coarse cloths, &c. [p. 106.] Dr. Henderson seems to think that Alexander learnt this mode of preserving snow in India: but that it was preserved during summer by this or some similar mode, half a century before the birth of Alexander, is evident from a passage in Prodicus *de Hercule*, —p. 11. Edit Simpson, Oxon. 1735.

In the time of Seneca the snow, collected from the mountains in the vicinity of Rome, and preserved in the manner described, was hawked about the streets, and sold in ice shops, and Dr Henderson quotes a passage from Mr Lumsden's remarks on the Antiquities of Rome and its Environs, which proves "that the modern inhabitants are still supplied in the same manner" [p 106.] This quotation points out a fact not generally known, that, when pressed closely and hardly down in the ice-house, snow is not only colder, but may be preserved longer, than cakes of ice taken from ponds or ditches [p. 107.] In the time of Nero, the Romans had substituted an elegant method of cooling their liquors, by means of snow, instead of the simple and coarse method of fusing a portion of it on the wine; "namely; by placing water, which had been previously boiled, in a thin glass vessel surrounded with snow, so that it might be frozen without having its purity impaired."

Dr Henderson alludes to the prevailing opinion of the ancients, that boiled water was most speedily converted into ice: "the experiments of modern chemists," he adds, "would seem to prove that this doctrine was not altogether without foundation" [p. 108.] Galen, one of the authorities referred to, likewise remarks that boiled water is not only more easily frozen, but also more easily cooled, even to any inferior degree; a fact worthy to be ascertained by experiment. And Aristotle informs us, that a barbarous nation near the Euxine, who used ice as a kind of cement for their huts, heated the water in order that it might concrete the sooner.[*]

Dr. Henderson concludes his first part, a history of the wines of the ancients, by a chapter on the use of wine at the banquets of the Greeks and Romans: their dishes, sauces, drinking vessels, chaplets, drinking of healths, and the various kinds of wine used, are treated in a very amusing manner.

He begins this chapter by very properly pointing out "the remarkable contrast between the customs of the Greeks and Romans: the Romans allowed the women to mix in their festive meetings, but forbade them the use of wine; while the Greeks permitted them to drink wine, but excluded them from all entertainments at which any but near relations were present" [p. 110.] Casaubon, indeed, maintains, that the Greeks did admit their women to banquets, generally, but the few instances he adduces, and the particular circumstances of the cases, only prove what the regular and established custom was: besides, the authority of Cornelius Nepos is most decided and express: his object was, to point out the strong contrast, in several respects, between the Greek and Roman customs, and he would not, therefore, have particularized these, unless the contrast had been not only strong, but confirmed by general usage.[†] Unmarried women certainly were not admitted to the banquets of the Romans, except in particular cases; but we are as little aware that their married women were at any period excluded, as we are that Grecian women were at any period admitted. In the early ages of Rome, the law as well as custom was very strict in prohibiting women from the use of wine. There must, however, have been strong suspicions of their compliance, since the key of the wine cellar was not intrusted to their charge, and they were obliged to salute their near relations, in order to ascertain from their breath whether they had violated the law.[*]

The contrast between the rude and coarse feasts of Homer's heroes, and the banquets of the later Greeks and the Romans, is well pointed out by Dr. Henderson. "Archestratus of Syracuse, who explored every land and sea, solely, as Athenæus alleges, for the purpose of studying the art of good living, digested the materials he had thus collected into an epic poem, under the title of Gastronomy, of which various fragments have been preserved: and Timarchides of Rhodes enlightened his countrymen by a work, of eleven books or upwards, on the same subject. A complete art of cookery, beginning with truffles and ending with tunny fish, was furnished by Philoxenus of Cythera, the prototype of some noted epicures of modern times, who prayed for the neck of a crane in order to prolong his pleasures; and who, when he dined abroad, was attended by pages carrying oil, vinegar, and other sauces, to season the dishes of which he might be invited to partake. Even Aristotle is said to have applied his talents to the compilation of a code of laws for the table, and to have been known among his contemporaries as a lover of fish. Nor, extravagant as they may often appear, were the boasts of the culinary artists of those days altogether vain; for the ample detail of their performances which has been handed down to us by the author of "Deipnosophistæ," shews, that they left but little for the inventive genius of their successors to accomplish.—p 112.[†]

Originally the two meals of the ancients divided the day; but when the pleasures of the table had become an important part of the business of life, the morning repast was reduced, and the dinner usurped the place of the supper; this was usually preceded, with those who lived luxuriously, by a collation of oysters, eggs, asparagus, lettuce, onions, figs, &c., and *mulsum* or a mixture of wine and honey was drunk. Dr. Henderson, in a note, points out a similar custom at the well-furnished tables of France. After the collation, came the first course of more substantial dishes: and then the dessert of pastry, fish and other delicacies, to provoke the appetite and give zest to the stronger wines which were then put in circulation.[‡]

Dr Henderson next proceeds to give a short description of their couches and tables; but we shall premise a few words respecting their dining apartments. These were always placed in the upper part of the house for the sake of prospect, and were twice as long as broad; the ceiling of the rooms did not correspond either to their magnificence in other respects, or to the luxury of their banquets; since it appears from Horace that a canopy was suspended over the table, and when this happened to fall the guests were enveloped in a cloud of dust [*Horat. Sat.* Lib. ii. 8.] The dining halls of some of the emperors, particularly Nero and Heliogabalus surpassed in splendor any thing in modern times; those of the former had their ceilings and sides formed of ivory plates, which, turning on swivels, exhibited changing pictures; and flowers, and perfumes were showered on the guests. The movement of the spheres was imitated in the vaulted roof, so that a different season of the year was represented as each course was placed on the table. But for further particulars on this subject, as well as on every other relative to the manners of the Romans, whether private, aristocratical, or regal, we must refer our readers to the very learned and amusing treatise of D'Arnay, or to the "Sketches of Domestic Manners and Institutions of the Romans."

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[*] Dr Falconer, On the knowledge of the Ancients Manchester Transactions, i 265.

[*] Dr. Falconer's paper in the Manchester Transactions, i. p. 262. This paper is much more sober and rational, and better supported by facts than the celebrated Treatise of Dutens, on a similar subject. The ancients certainly knew some facts in physics, at which the moderns have arrived very recently. The effect of the prism on the rays of light, was known to Seneca [Nat. Quæs. Lib. i. c. 7.] In the Treatise of Ptolemy on Optics, lately published, which was supposed to have been lost, he gives in his 5th book a theory of astronomical refraction, much more complete than that of any astronomer prior to Cassini: he begins his book by explaining the experiment with a piece of money, which, when concealed behind the sides of a vessel, becomes visible by filling it with water. The abstract of this work of Ptolemy, given in the history of optics in the Edinburgh Encyclopædia, is worth perusing. Not to multiply instances, we shall only add, that Plutarch was acquainted with the facts, that pouring oil on the sea makes it clear and calm; that if meat is hung under a fig tree, it is thereby rendered tender much sooner than it otherwise would be, and that salt water is made fresh by distillation, facts which are generally supposed to have been first ascertained very recently.—Plutarch's Symposiacs and Natural Questions, translated by several hands, pp 311, 162 and 464.

[†] For proofs that it was the custom to admit married women to Roman banquets, and that sometimes unmarried women were admitted, see Nepos. Præfat. Suet. Calig 17, and Claud 32, Valer Max Lib. ii. c. 1. § 2. and Plutarch's Symposiacs, 211. There are some excellent remarks on the genuineness, antiquity, and merits of Cornelius Nepos, in Gibbon's Miscellaneous Works, iv. 416.

[*] Aulus Gellius, Lib. x. c. 23.

[†] The name of Apicius must be familiar to our readers: there were three; one in the time of Sylla, the second under Tiberius; and the third under Trajan. The second was the most celebrated: he established what Seneca calls a school for good living, at Rome; and poisoned himself, because he thought he should starve on ten millions of small sesterces, the rest of his fortune having been expended on gluttony. Pliny states him "nepotum omnium altissimus gurges." he published a book on cookery. The third invented a mode of keeping oysters, so that some he sent to Trajan in Parthia were fresh and good when they arrived thither. It is doubtful whether the treatise "De Re Culinaria," was written by any of these three epicures.—Bayle in voc. Apicius.

[‡] The Orientals differed from the Greeks and Romans: the time for drinking was at the beginning of the feast, when fruits, sweetmeats, and wine were served up—hence the banquet of wine, mentioned in Esther, v. 6

The Greeks and Romans adopted the custom of reclining at their meals from the Asiatics; the ladies, however, continued to sit at table till the time of the first Cæsars. The couches were most splendid, inlaid with ivory, tortoise-shell, or the precious metals; the feet of solid ivory or bronze, and the coverings of purple cloth, richly embroidered [p. 113] They were furnished with mattresses of the softest down, covered with the richest stuffs.—[*Manners of the Romans*, p. 167.] Rose leaves were sometimes used for this purpose: the anecdote of the Sybarite is well known: those of extreme and fastidious delicacy of smell, had the leaves of the white rose carefully picked out, before they would allow their couches to be stuffed, or their tables to be spread with roses. The *triclinium* consisted of three parts like the Greek letter Π, hence its name; the couches were so elevated that footstools were requisite.

The tables were equally costly and magnificent; at first of maple or fir, then of citron and other rare woods. It appears from Martial and other authors, that the most esteemed of these woods were those that exhibited a variety and play of colours, like the peacock's tail.[*] The feet were ivory, with a circle of silver or gold round the edge [p. 113.] The sideboards were similar in material and ornament.

Amidst all this magnificence, there were one or two proofs of want of refinement, or meanness. Till the age of the emperors table cloths were not used; when introduced, they were of woollen, or silk and wool, embroidered and striped with gold and purple. It was long after the age of Augustus before the master of the house supplied his guests with napkins; previously, each brought his own; and it is said the custom was changed, because the slaves who carried them, conveyed away things in them which they ought not.[†] Sponge was employed to wipe their tables after dinner. The guests always dressed in white or some gay colour. Not to soil the couches, the feet were covered with slippers, or naked; their hands, and sometimes their feet, were washed; and they, as well as the apartment, were sprinkled with perfumes. Bills of fare and cups were distributed to each guest; each was attended by his own slave; these were employed in setting on and removing the dishes, sweeping and cleaning the table at each course, serving the wine, fanning, and driving away the flies.

Dr. Henderson describes at considerable length the various kinds of drinking vessels used by the ancients; the ivy and beechen bowls of the poorer classes, and the cups of the rich, "on which the sculptor, lapidary, and jeweller had displayed the perfection of their skill." We think, however, he is unfortunate in referring to Virgil for a description of the pastoral cup: his description is very inferior to that of Theocritus, to which we have already alluded. Indeed, most of Virgil's imitations of the Greek poet are inferior; the cast of his mind, the state of society, and other circumstances, render his picture of pastoral manners less faithful than they appear in Theocritus: and, perhaps, of all the passages of the Greek poet, there are few so exquisitely finished, and yet so natural and easy, as his description of the Sicilian cup in the first Idyllium.[*] The goblets bedecked with gems, to which Pliny, as quoted by Dr. Henderson alludes, appear, from a passage in Theophrastus, to have been first introduced among the Greeks by the officers of Alexander's army, on their return from the conquest of India; and the Asiatic artists then, as now, were celebrated for their superior workmanship in gems and precious metals.[†] Drinking vessels of brass, large and round, were also used, probably by the poorer classes in cities: they formed one of the articles imported into Adooli in Abyssinia, according to the Periplus of the Erythrean sea.[‡] The earthenware vases manufactured at Athens, Samos, Saguntum, and several towns in Italy, were also used, coated with bitumen which admitted of a fine polish, and sometimes imbued with aromatic substances [115.] Heliogabalus is said to have greatly increased the number and variety of these perfumed cups.[§] Of earthenware vases and cups, as well as those of the precious metals, Athenæus mentions nearly one hundred varieties. To this author, as quoted by Dr. Henderson, we therefore refer such as wish for further information on this subject; only particularizing the Thericlean and the Amphitheton, on account of the proverbs, to which they gave rise, and which are explained by Erasmus; and the *bria*, a species of cup from which the words e*brius* and e*brietas* are said to be derived.[‖]

The Romans were supplied with vessels of glass from the glass manufacturers of Egypt; here they were made in clearness equal to rock crystal, and gilded and stained in various colours.[¶] Glass was but little known in Rome prior to 536 U. C., and from a passage in Seneca, de Ira [Lib. iii. c. 40], we may infer, that in the time of Augustus drinking vessels of it were very rare and costly, otherwise Vedius Pollio would not have doomed the slave who broke one to such a cruel death; it is not clear, however, whether the vessel was of crystal or glass. In the time of Martial, as Dr. Henderson observes, they were very common, but the finer kinds, especially what were called *calices allassontes*, from their various and changing colours, were always rare and of high price, as is evident from their having been obtained by the emperor Adrian, while in Egypt, from a priest of the temple, and sent as a present to Servianus with strict injunctions to use them only on high occasions.[*] Martial, in one of his epigrams, recommends cheap and common cups of earthenware, as not liable to break with hot water; nor, like those bedecked with gems, holding out a temptation to the long and sharp nails of the guests, to pull them off, and steal them.[†] The same author, as quoted by Dr. Henderson, informs us, that broken glasses were trucked for sulphur matches.

Dr. Henderson adopts the opinion of M. de Rozière, that the celebrated murrhine cups of the ancients were formed of fluor spar. We cannot coincide in this opinion; fluor spar is not found in Karamania, from which district of Parthia, both Pliny and Propertius, though they differ with respect to the nature of these vases, agree that they came; its geographic situation seems confined to Europe.[‡] The expression of Propertius "*cocta focis*" is too strong and definite to denote the mere exposure to the heat of a furnace, such as is employed to change the colour of the fluor spar; the extreme thinness expressly stated by Pliny does not agree with the fluor spar: the odour by which, this author says, the stone from which the cups were made was distinguished, Dr. Henderson thinks must have been derived from the mastic, with which the last polish is at present given to the fluor spar; but Propertius expressly says, that the odour was that of saffron [Lib. iii. Eleg. ii. v. 22.] We are of opinion too that these cups were not formed of any gem or mineral; the passage in Propertius is directly against this, *Murrhiaque in Parthis pocula cocta focis:* the thinness of the vessels already stated also contravenes this supposition. The anecdote of Heliogabalus proves not the similarity of material, but only the equal rareness and value of vessels of onyx and murrhine.[§] We believe them to have been porcelain cups from China: the expression of Propertius proves that they were manufactured; they came to Rome from Egypt and Parthia, and the vicinity of the Euxine, all in the regular route from India; we can trace them beyond Karamania to Guzerat; here they were obtained when the author of the Periplus visited it; and he informs us, that they were brought to the market of Baroach from the interior of India, and we know from Ptolemy, Pliny, and the Periplus, that there was an inland communication between India, and even Parthia and China, at a very early period. Dr. Clarke saw at Constantinople some porcelain dishes a yard in diameter, that had been conveyed on the backs of camels from China. In the time of Belon (1555,) the Greeks called them La Mirrhe de Smyrna (to which place they were also brought from China, in the same manner as to Constantinople and Grand Cairo,) from Murex, a shell, called by the French the porcelain shell. From this it would seem that the name was given to the vases by the ancients from the resemblance of its colours to those of the murex, while, on the contrary, the French called the shell from the porcelain. Stolberg informs us that he saw in the collection of prince Bascari, at Catania, a little blue vase, which was believed to be a vas murrhinum.[‖] Inferior and spurious murrhine vessels were manufactured at Thebes in Egypt.

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[*] Martial, lib xiii. Ep. 85 Plin. Nat. Hist. lib. xiii. c. 25.

[†] Before the use of napkins was known, the ancients wiped their hands with the soft parts of the bread, which was afterwards thrown to the dogs, that always attended their meals; there is more than one allusion to this custom in the New Testament.

[*] Imitations of Theocritus much more effective may be found in the pastorals of Longus: this author, who certainly lived some centuries after Christ, presents exquisite pictures of pastoral scenery and manners, in a most pure style. His picture of the process and of the gaieties of the vintage, at the beginning of his second book, is evidently drawn from nature.

[†] Theophrast. Charact. c. 23. Philostratus [de Vita Apoll. Tyan. lib. iii. c. 8] describes the precious stones in India as large enough for cups and cooling vessels; he gives a curious picture of an oriental banquet.

[‡] Vincent's Navigation of the Ancients, ii. 15.

[§] Lamprid. Heliogab. 481.

[‖] Erasmi Adagia, pp. 397, 401. Bentley has an express and elaborate dissertation on the Thericlean cups, in his Dissertation on Phalaris, pp. 78—106. Bowyer's Ed. For the authorities respecting this derivation of *ebrius*, see the notes of Longolidus in Kapp's edition of Taciti Germania, p. 77.

[¶] χρυςαλλος originally signified ice; it was applied to rock crystal, in consequence of the belief of the ancients, that this was in reality ice in a state of permanent and unalterable solidity It is doubtful whether the word was ever used for manufactured glass; υαλος, however, the term for glass, was probably employed for crystal. In the time of Aristophanes it was sold in the shops of the Pharmacopolæ, who, according to the Scoliast, kept all rare and precious stones. Arist Nubes, v. 764, &c., and Schol. in loc. The glass here described was a burning glass. There is a learned and ingenious note on the crystal and glass of the ancients in Dr. Vincent, ii. 728. For the original meaning of χρυςαλλος, and the reason of its application to crystal, see Michaelis "De l' Influence des Opinions sur le Langage." p. 115.

[*] Vopisci Saturnin, 963.

[†] Martial, xii. 75. Juvenal, Sat. v. 40.

[‡] Article on Mineralogy, in Edin. Encyclop. Vol. xiv. p. 482.

[§] In Murrhinis et onychinis minxit. Lamprid. Heliogab. 502.

[‖] Whoever wishes to examine this question more thoroughly should consult the authorities referred to by Dr.

The most important usages and ceremonies regarding the wine drunk at banquets; the oblations to the Gods; the crowning of the guests and the cups with chaplets, the manufacture of which was a distinct branch of trade; the mode of drinking healths, on which occasion the glass was to be emptied to the bottom;[*] the duties and authority of the president of the feast; the custom of the master of the house keeping the best dishes and wines for himself and his favourite or richer guests, while the rest were obliged to be content with inferior fare;[†] so similar to the custom of placing some guests above and some below the salt, practised in this country not two centuries ago, and still practised in Russia; all these, and many other curious and amusing particulars are given in this very interesting chapter. The concluding paragraph we transcribe

"If we compare the ceremonies and usages above described, with the convivial customs of the present day, we cannot but be struck with the numerous coincidences which subsist between them. The arrangement of our dinners, the succession and composition of the different courses, the manner of filling our glasses, of pledging our friends, and of drinking particular healths, are all evidently copied from the Greeks and Romans; and although certain peculiarities in our situation and habits, have rendered the use of bumper cups and undiluted liquors too prevalent among us, yet the common distribution of wines at our banquets cannot be considered as very different from that which we have been discussing. With another modern nation, however, which has been thought to resemble the ancient Greeks in character, the analogy is still more complete. Thus, at all entertainments among the French, the ordinary wine is used with a large admixture of water, generally in the proportion of one to three, except immediately after soup, when it is drunk pure. The finer kinds are circulated in the intervals, between the courses, or towards the end of the repast, and hence are termed *vins d' entremets;* but, with particular dishes certain wines are served, as Chablis with oysters, and Sillery after roast meat. The *coup d' avant* of *vermuth* has been already noticed as corresponding with the draught of *mulsum*, and the *coup du milieu*, which consists of some liqueur, "quod fluentem nauseam coerceat," may be regarded as identical with the cup of sweet wine, handed round in the middle of a Grecian feast. With the dessert the luscious sweet wines are always introduced"—pp. 127, 128.

(*To be continued.*)

RURAL ECONOMY.

WATER WHEELS.

[On the construction of water-wheels and the method of applying the water for propelling them so as to produce the greatest effect, communicated for the American Farmer, by request of the Editor.]

To the Committee of the Franklin Institute in Philadelphia.

In constructing water wheels, especially those of great power, the introduction of iron is a most essential improvement, and if this metal, and artisans skilled in the working it could be obtained at reasonable rates, water wheels might be made wholly of it, and prove ultimately the cheapest, as, if managed with due care, and worked with pure (not salt) water, they would last for centuries; but as the first cost would be an objection, I would recommend in all very large wheels that the axis be made of cast iron, and in order to obtain the greatest strength with the least weight, the axis or shaft ought to be cast hollow, and in the hexagon or octagon form, with a strong iron flange to fix each set of arms and the cog wheel upon, these flanges to be firmly fixed in their places with steel keys.

On the adaptation of water wheels to the different heights of the water falls by which they are to be worked, I remark that falls of 2 to 9 feet are most advantageously worked with the undershot wheel, falls of 10 feet and upwards by the bucket or breast wheel, which up to 20 or 25 feet ought to be made about one sixth higher than the fall of water by which it has to be worked; and in wheels of both descriptions, the water ought to flow on the wheel from the surface of the dam. I am aware that this principle is at direct variance with the established practice, and perhaps there are few wheels in these states that can be worked as they now are fixed, by thus applying the water; the reasons will be apparent from what follows.

In adjusting the proportions of the internal wheels by which machinery is propelled, it is necessary in order to obtain the greatest power, to limit the speed of the skirt of the water wheel so that it shall not be more than from 4 to 5 feet per second, it having been ascertained by accurate experiments that the greatest force of water obtainable is within these limits—As a falling body, water descends at the speed of nearly 16 feet in the first second, and it will appear evident that if a water wheel is required to be so driven, that the water with which it is loaded has to descend 10, 11, or 12 feet per second, at which rates wheels are generally constructed to work, that a very large proportion of the power is lost, or rather, is spent in destroying by unnecessary friction the wheel it is flowing upon.

In the common way of constructing mill work and of applying water to wheels, it has been found indispensably necessary to have a head of from 2 to 4 feet above the aperture through which the water flows into the buckets, or against the floats of a water wheel, in order to be able to load the wheel instantaneously, and without which precaution it could not be driven at the required speed; from this circumstance it has been erroneously inferred that the impulse or shock which a water wheel so filled receives, is greater than the power to be derived from the specific gravity of the water alone. This theory I have heard maintained among practical men, but it is, in fact, only resorting to one error to rectify another. Overshot wheels have been adopted in numerous cases merely for the purpose of getting the water more readily into the buckets—but confine the wheel to the proper working speed, and that difficulty does not exist.

In consequence of the excessive speed at which water wheels are generally driven, a small accumulation of backwater either suspends or materially retards their operations, but by properly confining their speed, the resistance from back water is considerably diminished, and only amounts to about the same thing as working from a dam as many inches lower as the wheel is immersed, and in undershot wheels worked from a low head, or situated in the tide way, the resistance from back water may be farther obviated by placing the floats not exactly in a line from the centre of the wheel, but deviating 6 or 8 inches from it, so as to favour the water leaving the float ascending.

In constructing water wheels to be driven at the speed of 4 to 5 feet per second, it will be requisite to make them broader to work the same quantity of water which is required to drive a quick speeded wheel. Thus if a person intending to erect a mill, has a stream sufficient to work a wheel of 5 feet broad, the skirt to move 10 feet per second, it is evident that if he wishes to work all the water which such wheel takes, he must have his wheel 10 or 12 feet broad instead of five, otherwise the water must run to waste, as there would not be room in a slow moving wheel of 5 feet broad to receive more than half of it. The principal advantages resulting from the proposed method of adapting wheels to the falls by which they are to be worked, and the method of applying water, are

1. The lessening of friction upon the main gudgeons, (and first pair of cog wheels,) by which, with a little care, they may be kept regularly cool, and the shaft or axis be preserved much longer in use than when the gudgeons cannot be kept cool.

2. By working water upon the principle of its specific gravity alone, and applying it always at the height of the surface of the dam, its power is double what is obtained by the common method of applying it.

3. The expensive penstock required to convey the water to the wheels, generally used, will not be needed, as one much shallower and consequently less expensive will be sufficient.

4. The resistance of back water is reduced as far as possible.

5. The risk of fire is less as the friction is reduced.

I shall close this paper with remarks upon those establishments I have inspected in the course of the present year.

Mr. Smith's newly erected corn mill on the Rariton, at New Brunswick, N. J., has water wheels 16 feet high and 11 feet broad, which are worked by a head of four feet. The water wheels make 12 revolutions per minute, equal to 10 feet per second, when the stones (five feet diamater) make 100 revolutions.

The water wheels at the flour mills at Brandywine near Wilmington, are worked at the speed of 10 to 15 revolutions per minute; the wheels generally 16 feet high, and the fall 20 feet.

In all these establishments, there is not 50 per cent. obtained of the power of the water used.

The water wheels at Fair Mount, used for supplying Philadelphia with water, are 16 feet high and 14 feet wide, worked by a head of 5 feet; they are driven at the rate of 13 revolutions per minute, which is equivalent to 11 feet per second for the motion of the skirt of the wheel.

The machinery used here, is highly creditable to to the workmen who put it up; but if the principle of applying water, which I have endeavoured to establish, be correct, it will be readily perceived that a very considerable loss of power is sustained by its mode of application.

If these water wheels as situated at present, were confined to make no more than 5 revolutions per minute, and the pumps to make the same number of revolutions they do now, that is 13 double strokes, the water flowing against the wheel at the surface of the dam, each wheel would work two of the pumps, with the water that is now taken to work one. But if the wheels were placed 18 inches lower in the tide-way, ¾ of the water required to work one pump, would work two at equal speed, while the wheel continued free, and it would require no more than is now used to work one pump, to work two with the wheel immersed 18 inches in the tide. This will, I trust, be sufficiently clear, when it is considered, that by the reduced speed, an addition of 150 per cent. in the quantity of water is thrown into the wheel and kept there, together with the advantage gained between the water descending 4½ instead of 11 feet per second.

September 24, 1825.

Henderson [p. 117,] by Dr. Vincent, ii, 322. Dr Clarke, viii. 191. Fosbroke in his Encyclop. of Antiquities in voc., and Stolberg's Travels, ix. 280.] Stolberg mentions a treatise by prince Biscari, Ragionamento di Vasi Murrhini, which we have never seen.

[*] Theocr. Idyll. vii. 70, and Schol. in loc. The phrases were bene vobis, bene tibi. Plaut. Pers. v. i. 20. There is a facetious epigram in Brunck's Anthol. Græc. [illegible] 316, which illustrates the custom of toast-drinking among the ancients. At Athens three officers attended the public entertainments, provided lights and torches, and took care every person drank his due portion.

[†] Augustus seems not to have followed this custom. Sueton. August. 74.

LADIES' DEPARTMENT.

BEST METHOD OF PRESERVING ALL KINDS OF COOKED BUTCHERS' MEAT, FISH, OR POULTRY.

Of all the methods of preserving animal substances for domestic purposes, or sea store, the process found out by Mr. Appert, and pursued in this metropolis upon a large scale by Messrs. Donkin and Gamble, is unquestionably the best. It is as follows:

Let the substance to be preserved be first parboiled, or rather somewhat more, the bones of the meat being previously removed; put the meat into a tin cylinder, fill up the vessel with the broth and then solder on the lid, furnished with a small hole. When this has been done, let the tin vessel, thus prepared, be placed in water and heated to the boiling point, to complete the remainder of the cooking of the meat. The hole in the lid is now closed perfectly, by soldering, whilst the air is rushing out.

The vessel is then allowed to cool, and from the diminution of volume in the contents, in consequence of the reduction of temperature, both ends of the cylinder are pressed inwards and become concave. The tin cases, thus hermetically sealed, are exposed in a *test-chamber* for at least a month, to a temperature above what they are ever likely to encounter; from 90° to 110° Fahrenheit. If the process has failed, putrefaction takes place, and gas is evolved, which in process of time will bulge out both ends of the case, so as to render them convex instead of concave. But the contents of whatever cases stand this test, will infallibly keep perfectly sweet and good in any climate, and for any length of time. If there was any taint about the meat when put up, it inevitably ferments, and is detected in the *proving* process.

All kinds of animal food may be preserved in this way—beef, mutton, veal, and poultry, either boiled or roasted. The testimonies in favour of the success of the process are of the most unexceptionable kind. At Messrs. Donkin and Gamble's establishment the meat is put up in canisters of from 4 lbs. to 20 lbs. weight each. It is charged from 1s. 8d. to 3s. a pound; roast higher than boiled, and veal dearer than mutton or beef. The weight of the canister is deducted, and nothing is charged for the canisters; and it should be observed that these provisions being cooked, and without bone, render them equivalent to double the weight of meat in the raw state; for it is certain, that the waste in cooking, together with the weight of bone, are about one half.

Captain Neish took a quantity of provision, thus prepared to India, not one canister spoiled; and one which he brought home contained beef in the highest state of preservation after two years, and having been carried upwards of 35,000 miles in the warmest climates.

The commissioners for victualling the navy also examined some, nearly four years old, which had been in the Mediterranean and Quebec, and found it as sound, sweet, and fresh, as if it had been only yesterday boiled. We are enabled to add the testimony of that distinguished navigator, captain Basil Hall, who has liberally communicated to us the result of his personal experience and observation, which is as follows: "I can answer for the perfect preservation of a great number of cases which were in my possession during the voyage to China. I had 88*l.* worth, and not one failure. At that time milk was preserved in bottles corked; but tin cases have been substituted with very great effect, as I have myself tried. It is really astonishing how excellent the milk is; and, indeed, every thing preserved in this way is good."

"You must, on examining the list of prices, bear in mind, that meat thus preserved *eats* nothing, nor *drinks*—is not apt to get the rot, or to die—does not *tumble* over-board, nor get its legs broken, or its flesh wore off its bones, by knocking about the decks of a ship in bad weather—it takes no care in the keeping—it is always ready—may be eat cold or hot—and thus enables you to toss into a boat in a minute, as many days' *cooked* provisions as you choose—it is not exposed to the vicissitudes of markets, nor is it scourged up to a monstrous price (as at St. Helena,) because there is no alternative. Besides these advantages, it enables one to indulge in a number of luxuries, which no care or expense *could* procure."

In this preservative process is displayed a singular and important fact with regard to the agency of oxygen in putrefaction. The tin canisters being closed during the exposure to heat, must necessarily contain, with the included matter, some portion of air; and if heat were not applied, or even if applied imperfectly, putrefaction would take place. This proves that the effect of the high temperature is to produce some kind of combination of the oxygen of the air with the animal or included matter, not leading to putrefaction, or even counteracting it, while by this combination it is effectually removed. The air accordingly, where the process is successful, is deprived of oxygen; but if the heat were not sufficiently prolonged, and by far the greatest part of the air in the vessel not exhausted, putrefaction soon comes on. From experiments that have been made on this mode of preserving alimentary substances, it has been proved, that if the vessels were opened only for a short time and again closed, without heat being applied, the inclosed substances soon putrefied: as they did also from mere exposure to the air. But if, after having been exposed even for an hour or two, they were re-placed, the vessels again treated as before, and then the due degree of heat applied, they could be preserved as at first. And this repeated exposure to the air, and removal of its operation by heating, it appears from Gay Lussac's experiments, can be renewed a number of times. Nay, by occasional exposure to the heat of boiling water, without the exclusion of the air, he found the exemption from putrefaction to be attained.

The theory of these effects is not very apparent. Gay Lussac supposes, that the oxygen may combine with that principle analogous to gluten, which excites fermentation, and which may equally excite putrefaction; that this by a kind of coagulation is separated by heat, and thus rendered inert; and that it is only that part of it which has suffered oxygenation which is capable of this coagulation; it is thus removed, while the exclusion of oxygen prevents the putrefaction from taking place, which would otherwise be excited by the remainder. But this is rather hypothetical and unsatisfactory.

MISCELLANEOUS.

IMPORTANT INVENTION.

We understand, that a Mr. Kay, of Preston, has invented a mode of spinning by machinery, which bids fair to work a complete revolution in the linen manufacture, and to give this country advantages in that manufacture which it has not hitherto possessed. We are not acquainted with the particulars of Mr. Kay's invention, but we are informed on very good authority, that, from an inferior description of flax, and with very little heckling he is enabled to spin, 200's yarn without difficulty. Some idea may be formed of the value of this discovery, when it is known that the price of linen yarn of this degree of fineness, in the neighbourhood of Valenciennes, where it is used for the manufacture of the finest thread lace, is about 1,200 francs, (or nearly *l.* 50 sterling,) per pound weight. We understand that instead of heckling his flax, Mr. Kay steeps it in a liquid that dissolves the glutinous matter by which the fibres are connected together, and thus, without injuring the strength of the flax, he gives it a degree of fineness which is not attainable by any other process. He has, we believe, secured his invention by a patent; and several cotton spinners at Preston have paid considerable sums for the privilege of exercising it.—*Manchester* (*Eng.*) *Guardian.*)

HABITS OF ANIMALS.

Acquired habits are hereditary in other animals besides dogs. English sheep, probably from the greater richness of our pastures, feed very much together, while Scotch sheep are obliged to extend and scatter themselves over their hills for the better discovery of food. Yet the English sheep, on being transferred to Scotland keep their old habit of feeding in a mass, though so little adopted to their new country; so do their descendants: and the English sheep are not thoroughly naturalized into the necessities of their place till the third generation. The same thing may be observed as to the nature of his food that is observed in his mode of seeking it. When turnips were introduced from England into Scotland, it was only the third generation which heartily adopted this diet, the first having been starved into an acquiescence in it. In the same manner it required some years to establish the English practice of bringing up calves by hand in Scotland; the first who were so fed, being cheated into swallowing milk, as the English calves at first are, by dipping the finger in the bowl and giving it to the animal to suck. Nor was this mode of administering nourishment (slowly and reluctantly admitted by lowland calves) ever I believe, cordially adopted by their mountain kindred. The highland beast has shown himself the worthy imitator of the highland man, and is as obstinate in his opposition to this, as his Celtic master is to any of the Saxon improvements which can be offered to him.

SPORTING OLIO.

Sassafras Neck, Cecil county, Md. Feb. 11, 1826.

Mr. Skinner—

Philockuon would willingly have mentioned the name of the old setter, (so distinguished for performances,) as well as that of his owner, in his communication upon the Field Dog, could he have ascertained his pedigree as a recommendation of the strain. It is only known that this dog is a cross of the pointer and setter, and this very circumstance (if British sportsmen are to be relied on) precludes any certainty in regard to the value of this stock. Although this dog is unquestionably fine in the field, on account of the above objections, he could not be recommended as a breeder to those who are desirous of improving the animal to a degree of perfection equal to that attained by our rivals across the water.

Medicine for a Pointer, or Hound Dog, when taken with the distemper.

Two ounces of sulphur, one ounce of jalap, two ounces of syrup of buck-thorn, well mixed together—give a ball of the size of a pigeon's egg once a day.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 24, 1826.

For Sale.—The Editor has possession of, and offers for sale, a colt which he believes he may safely recommend to those who would have a first-rate horse for the turf or a very superior stallion derived on both sides from the purest English blooded horse.—He candidly believes, that *such* a colt, ought to sell at this time for $500; yet he is willing, never having owned a racing horse, nor having any means of employing a stallion, to take for this colt, which is 15 hands high and two years old, on the day after to-morrow, $350. He is of iron grey-roan colour, a beautiful blaze down his face, and two white feet.—he is well formed at all points, but especially and eminently in his shoulder and withers—is of high spirit and fine action, and gives every assurance of being a very beautiful as well as a large horse. His pedigree is as follows. He was got by

Silver Heels, who took the highest premium at the cattle show in Baltimore, in the year 1821. Silver Heels is upwards of 16 hands high, was got by Oscar, who was got by the imported horse Gabriel (sire to Post Boy, Harlequin, and Lady Jack Boll, grand dam of Chance Medley)—Oscar's dam was Vixen by old Medley; grand dam Col. Tayloe's Penelope by old Yorick; great grand dam by Ranter; great great grand dam by old Gift. Silver Heels' dam was Pandora, who at three years old sold for a thousand dollars; she was got by Col. Tayloe's grey Diomed, who was got by the imported horse Medley; his dam by Sloe; his grand dam by Valiant out of the imported mare Calista, the property of Col. Wm. Byrd, of Westover. The above horse Sloe was got by old Partner, out of Gen. Nelson's imported mare Blossom; her dam was got by Mr. Hall's Union; her grand dam by Leonidas; her great grand dam by the imported horse Othello; her great great grand dam by the imported horse George's Juniper; her great great great grand dam by the imported horse Morton's Traveller; her great great great great grand dam was Col. Tasker's imported mare *Selima*, who was got by the *Godolphin Arabian*.

Gabriel (bred by Lord Ossory,) was got by Dorimont; his dam by the famous High Flyer; grand dam by Snap, out of Shepherd's Crab mare (the dam of Chalkstone, Iris, Sphinx, Planet, and other good runners)—her dam was Miss Meredith by Cade, out of the *little Hartley mare*.

Medley was got by Gimcrack (Cripple Godolphin Arabian)—his dam, full sister to the dam of Sir Peter Teazle, was Araminda by Snap; grand dam Miss Cleveland by Regulus; great grand dam Midge by Bay Bolton; great great grand dam by Bartlet's Childers, great great great grand dam by Honeywood's Arabian, out of the dam of the two True Blues. Thus you see, that Medley's blood, so *desirable* among sportsmen, flowed through Grey Diomed, the sire of Pandora, the dam of Silver Heels; and also through Vixen, the dam of Oscar, sire of Silver Heels;—who is of course a quarter Medley, and a quarter Gabriel, the best running blood in America.

Gabriel won fifteen races in England in three years, four of them king's plates.—Oscar was a capital runner—his colts, Columbus, Northampton, Partnership, Red Bird and the Maid of the Forest, good runners.

Pandora won the great sweepstakes at Piscataway, at three years old, and afterwards beat every thing in Baltimore the four mile heats, in great style—(was out of the dam "Floretta")—she was then put to breeding; her colts, Pocahontas, Red Bird, Aurora, and Silver Heels, all great runners. Silver Heels, at two years old, was led over the Centreville Jockey Club course, and took the colt's purse, at 3 years old he was winning the great sweepstakes at Washington, when unluckily he fell, the same fall at Easton he won the Jockey Club colt's purse, at 5 years old, he won the first day's Jockey Club purse at Easton; at Marlborough the same fall, he made a capital race, three four mile heats—the first heat he was beat by Mr. Jenifer's Chance colt six inches, (in bad condition, running the heat over that heavy course in eight minutes six seconds,)—the second and third heats were won, severally contested, by Mr. Johnson, of Virginia, his [illegible], a capital horse.

ROBERT WRIGHT.

[On the side of the dam, the pedigree of my colt is as follows.]

Blackford, 14th Nov. 1825.

My dear Sir,—I received your letter, and inclose you the certificate of Vingt'un the sire of Aurora out of Pandora. "Vingt'un was got by the imported horse Diomed out of the dam of Maria; Maria's dam was got by Clockfast, brother to Gimcrack, out of John Burwell's noted mare Maria, who was got by Dunmore's Regulus," who was got by the *Godolphin Arabian*.

EDW. LLOYD,
R. WRIGHT.

The Editor unites with some of his correspondents in the particular desire, to obtain from various positions on the tide waters of the Chesapeake Bay, the exact rise and fall of the tides, from actual measurement. The investigation, which will be aided by such information, may establish results highly advantageous to landholders in the positions referred to.

SINCLAIR & MOORE

Offer for sale at their Agricultural Repository, near Pratt street wharf, Baltimore.

400 bushels Clover seed, (carefully selected for retail.)
200 do. Orchard Grass seed.
100 do. Timothy and Herd Grass do.
400 do. Early White seed Potatoes.
200 do. Spring Barley for seed.
300 Ploughs, of various kinds and sizes.

Wheat Fans, Cutting Boxes, Cultivators, Corn Shellers, Spring Steel, Hay and Manure Forks, Spades and Socket Shovels, with handles, Field and Garden Hoes, Trace Chains and Hames.—*Also*,

A general assortment of Garden seeds.

SMITH'S COTTON PLANTER AND CULTIVATOR.

Those interested in the culture of cotton are informed that a machine is invented for planting and cultivating this crop, which promises to be of great importance. It has been lately exhibited both in Petersburg and Richmond, and met the approbation of all who had an opportunity of seeing it. Those who associate large crops of tobacco or corn with cotton, will find it a valuable acquisition. It is computed that one hand with this machine will plant or cultivate, ten acres per day. They are so simple in their construction that any common mechanic can make them, any farmer keep them in repair. The following certificate, to which many more respectable names might have been added, will no doubt be perfectly satisfactory.

Having witnessed the operation of Mr. Smith's Patent Cotton Planter and Cultivator, we have no hesitation in saying that it fully answers the purpose for which it is designed. It opens the furrow, drops the seed at any regular distance required, covers it lightly, and rolls it at one operation, and all much better than it could be done by hand. After the cotton is up, two small ploughs are then attached, which removes the grass and weeds from both sides of the plant at once. It operates as fast as a horse usually walks. It is necessary, however that the land should be first listed, and free from stumps or other obstructions. Signed by

Richard Field, William M. Atkinson,
Robert Bolling, Francis G. Yancey,
Wright Robinson, E. Stokes.
Alex. Cunningham,

☞ Orders for them will be received by Lewis Webb & Co. Richmond, James R. Kendall & Co. Petersburg, and Sinclair & Moore, Baltimore, where the machine may at any time be seen.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8 50			
BACON, and Hams, . .	lb.	7	10	9	12
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java, ...	—	16	18	22	25
Havana, ...	—	15	17	18	20
COTTON, Louisiana, &c.	—	16	18		
Georgia Upland, . . .	—	14	14½		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11	11	12½
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90	95	1 00	
FLOUR, Superfine, city,	bbl.	4 50	4 62	5 50	6 25
Fine, ...	—	4	4 25		
Susquehanna, superfi.	—	5 00		none	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	68	70	75	
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	75	92		
do. Red, ...	—	90			
do. White Flint, . .	—	2 00			
Rye, ...	—	55	57		
Barley, ...	—	90	95		
Clover Seed, Red . .	bush	4 50		5	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	—	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	40	42	45	
Beans White, ...	—	1 37½		1 50	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	30	37	50
HOGS' LARD, ...	—	9	9½	12	
LEATHER, Soal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45		62	75
Havana, 1st qual. . .	—	28½	29½	37½	
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	1 75	2 00		
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2 00	2 12		
OIL, Whale, common, .	gal.	30		40	50
Spermaceti, winter .	—	70		88	1 00
PORK, Baltimore Mess,	bbl	12 50			
do. Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	5 25			
RICE, fresh, ...	lb.	3	3½	5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5½	7	8	12
WHISKEY, 1st proof, .	gal.	25½	27	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	none
APPLE BRANDY, 1st pr	—	35	37	50	none
SUGARS, Havana White,	c.lb.	13 50		15	16
do. Brown, . .	—	10	10 25		
Louisiana, ...	—	8 50	9 75	10	11
Loaf, ...	lb.	19	22	20	23
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	89		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	17½	18	25	
SALT, St. Ubes, ...	bush	46	48		
Liverpool Blown . .	—	51	55	75	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal	2 50	3 00	3 50	4
do. Sicily, . .	—	1 [illegible]	1 3[illegible]	2 00	
Lisbon, ...	—	1 15	1 25	1 5[illegible]	1 75
Claret, ...	doz	4	8	5 00	8 00
Port, first quality, . .	gal.	1 5[illegible]	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	4[illegible]	unwashed free of tags.	
do. crossed, . .	—	2[illegible]	30		
Common, Country,	—	25			
Skinners' or Pulled,	—	31	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by John D. Toy, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

SHEEP.

Selections for the Pennsylvania Agricultural Society.

Extracts from Dr. Parry's Essay on the Nature, Produce, Origin, and Extension of the Merino breed of Sheep.

(Continued from page 386.)

Rambouillet Flock—Lasteyrie's account.

At the beginning of the French revolution, the Rambouillet flock was placed under the direction of an agricultural committee, consisting of Messrs. Bertholet, L'Heritier, Cels, Vilmorin, Dubois, Gilbert, Huzard, Parmentier, and Rougier-Labergerie; to whom was afterwards added M. Tessier. To the last of these gentlemen, in conjunction with M. Huzard, has of late devolved the office, at first executed by Gilbert, of presenting to the Class of Les Sciences, &c. of the National Institute, an annual report of the state of this flock.

M. Lasteyrie has given extracts from these reports from the years 5 to 10, (1797 to 1802,) inclusive. From these it appears that in 1797, the average weight of the fleeces in the yolk was 3 kilogrammes, 3 hectogrammes, or about 7 lbs. 8 oz. English, without reckoning that of the bellies and tail; that the average price of the fleeces as above, was 4s. 2d., that of the rams 2*l.* 19s. 2d. and of the ewes 4*l.* 9s. 2d.; and that the greatest price of any sheep was 8*l.* 5s.

In the report of the same flock, for the year 1802, of which but few particulars are given by Lasteyrie, it is said that the medium weight of the fleeces of full grown nursing ewes of all ages, was 3 kilogrs 68 grs., or about 8 lbs. 7 oz. English; that of the ewes of three years old, which had not had lambs, 4 kilogrammes, 284 grs., or about 9 lbs. 13 oz. each; of the 2-tooth ewes, not shorn when lambs, 4 kilogrs. 606 grammes, or about 10½ lbs. each; of the rams of three or four years old, 5 kilogrammes, 975 grs., or about 11 lbs. 5¼ oz. each. The medium weight of the fleeces of 84 rams and wethers, and of 219 ewes, in all 303 fleeces, was 4 kilogrammes, 557 grammes, or 10 lbs 7 oz. English. The weight of some of the rams' fleeces, was nearly 8 kilogrammes, or about 18 lbs. 5¼ oz. each. Notwithstanding this astonishing weight, it is said not to have included that of the belly, legs, and head of the sheep, which weighed, on the average of each animal, 366 grammes or nearly 13½ ounces. The wool of this flock appears, from these reports, to waste, all parts included, more than two-thirds in scouring; and the superiority of weight of the fleeces in the year 10, is partly attributed to their having been then imbued with an unusual quantity of yolk. Each fleece sold, on an average, at the increased price of about 1*l.* 3s. 4d. sterling.

Of the sheep disposed of at the public sale in that year, 59 were rams, and 97 ewes. The lovest price of a ram was 13*l.* 2s. 6d., and the highest 26*l.* 5s. The lowest price of an ewe was 7*l.* 13s. 4d., and the highest 14*l.* 17s. 6d.

In order to afford the means of judging of the improvement of this flock, both in quantity of wool and size of carcass, we are told, that while the best nursing ewes of the new importation in 1800, mentioned above, and amounting to 30, under various favourable circumstances, and bearing fleeces of 13 months, produced only 99½ kilogrammes of wool, or about 227¾ lbs. English; the same number of the nursing ewes of the improved Rambouillet breed, yielded in twelve months, and with worse keep, 115½ kilogrammes, or about 264 lbs. 5¼ oz. English; which makes a difference of 1 lb. 3½ oz. each fleece.

The sheep were at the same time, considerably increased in size. The three largest rams and ewes of each sort being weighed, it was found that the weight of the rams descended from the first importation, exceeded that of the second, 13 kilogrammes, 667 grammes, or about 31 lbs. 8¼ oz. each, and that of the ewes 12 kilogrammes, 900 grammes, or 28 lbs. 5¼ oz. each. The average height of the rams from the first importation exceeded that of the second, 8 centimetres, or 3.1656 inches English; that of the ewes 3 centimetres, or 1.1871 inch. In length (probably from the nape of the neck to the root of the tail,) the difference of the rams was 13 centimetres, or 5.1441 inches, and of the ewes, 22 centimetres, or 8.7054 inches. In girt, round the largest part of the carcass, the superiority of the rams was 4 centimetres, or 1,5828 inches; and of the ewes 14 centimetres, or 5 5398 inches

I have seen several specimens of the Rambouillet wool of 1802, and possess some of the same flock, obtained for me by a near relative from M. Lasteyrie. As far as I can judge of them by the naked eye, they are equal to the R. wool of the Spanish piles.

It appears from my former quotation, that the wool bears at least as great a price as that of the Spanish in the yolk, in France; and all the trials of it in cloth, cassimere, &c., have proved it to be in no respect inferior in quality.

A school for shepherds has been established at Rambouillet, to which young men are sent for instruction from the different departments in France, and from private persons. For this privilege each pupil pays thirty shillings per month.

Besides that of Rambouillet, there are two other national establishments of Merino sheep in France. One of these is at Pompadour, formed in 1798, from a Rambouillet flock, composed of 70 ewes and 10 rams. In 1802 this flock had increased to 249 sheep and lambs The other establishment of Merinoes is at Perpignan.

We are told by Lasteyrie, that in 1799, there were 500 flocks of French sheep, crossed with Spanish rams, many of them to the second and third generation. It is supposed that, in the year 1802, there were in France 15,000 sheep of the pure Merino breed; and nearly 1,000,000, the wool of which was meliorated by having been crossed with that race.

The eagerness to procure them was extremely great. This appears from the accounts already given of the great increase in their species. They had been demanded and obtained by 21 departments; and at the public sale at Rambouillet, in 1802, no less than 57 farmers were purchasers.

French Merinoes improved by selecting the best sheep as well as the best fleeces.

"From the account which I have thus given, it appears that the Spanish breed of sheep has been much improved in weight, and, probably, fineness of fleece, and has considerably increased in size, by having been naturalized in France. These valuable points have been accomplished chiefly in the following ways:—

1st. By choosing for breeding the best, and finest woolled rams and ewes.

2nd. By never allowing them to propagate till they have attained their full growth; which, at the earliest, is not till nearly three years of age.

3rd. By separating the weak from the strong; and

4th. By giving them plenty of good food, and free air and exercise."

Rambouillet Flock—Food.

"With regard to food, it is certain that the Rambouillet flock is most abundantly supplied. In the summer, they are fed in the field with natural grass, or soiled with clover or lucerne. In the winter they have meadow hay or lattermath; clover, lucerne, or vetch hay, or lattermath; straw, chaff of corn and oats. The straw is put in their racks, and serves, at the same time, for litter. Some of the sheep have each half a pound of oats daily. They are folded on healthy ploughed land, in dry weather, from the middle of July to the end of October; and are housed during the whole winter in airy buildings; except that they are made to walk out for two hours every day. Some oats are given to the rams during the season of copulation; and the French think that a great deal of the size and woolliness of the offspring depends on the vigour of the ram, rather than of the ewe."

Division of the Food—Yeaning.

"The sheep are divided into three separate flocks, lambs, ewes, and rams The young lambs remain with their dams during the day, are separated from them at night, and weaned at the age of five or six months.

A month before lambing, a little bran, or some oats, peas, horse beans, or other corn, is given to the ewes; and the same food is continued for a month or more afterwards, especially when a sufficient quantity of good herbage is not to be obtained in the fields. A little bran is also given to the lambs, as soon as they are able to eat it. This supply of bran and corn is said to be unnecessary when there is sufficient pasturage."

Use of Salt.

"It is recommended to allow salt, either alone, or mixed with bran or oats, in the proportion of half an ounce per diem to each sheep. Clear, and if possible, running water, is given to the sheep every day. Whether housed or folded, they are never permitted to go out to feed till the dew is dissipated; and to this precaution is chiefly attributed their exemption from the rot. With the same view in moist weather, their hunger is first appeased with dry food.

According to the French writers, the most unwholesome of all land, is that which is overflowed in the winter, and dry in the summer.—

Trees, sheds, or houses are ready for sheltering the flocks from the extreme heats of the summer and autumn.

From 30 to 40 ewes are allotted to each ram. I have already mentioned that both sexes should be, at least, two years old; but we are told, that if persons are eager to augment their flocks, the 2-tooths may be allowed to take the ram without injury, provided the lambs are made to suck other dams, or she goats; it having been found that it is nursing, rather than gestation, which impedes their growth, and lessens their fleece.

Attention being paid to these cautions, the rams may be used for breeding till the age of seven or eight years, and the ewes till that of 11 or 12."

Weaning gradually performed.

"For the sake of the ewes, as well as of the lambs, the weaning is always performed gradually.

The tails of the sheep, and the horns of the rams are always shortened.

I have mentioned, that the wool of the fourth cross of the Merino ram with common ewes, (of fine woolled breeds) is usually equal to that of the pure race. It is asserted by Gilbert, and agreed to by other breeders, that at this period, a ram of the mixed breed, which appears to have all the requisite qualities of the fleece, may, in that view, be used for generation equally with the best pure Merino. Of the truth of this position, I shall, therefore, adduce many satisfactory proofs.

Mr. Pictet prefers putting his ewes to the ram, during their first heats; which happen, with him, about the beginning of July. In this manner the lambs fall in December; and the ewes are fed in the house from a month before yeaning till spring, with lattermath hay of lucerne and clover, and a handful or two of oats each every day. This food is said to give them abundance of milk.

In order to increase the growth of his lambs, which he considers as a point the most essential to the size and form of the adult animal, Mr. Pictet gives each of them, night and morning, from the age of three months till the time of weaning, a handful of bran, and half a handful of oats; and afterwards double that quantity till they are eight months old. At five months, he weans them, gradually, by first separating them from the ewes at night only. If, at the time of weaning, there is not abundance of healthy grass, he supplies this defect by hay or lucerne."

Folding.

"He folds his sheep at night upon his arable land, during five or six months of the fine season, where they feed, during the day, on the fallows, the stubbles, or natural and artificial grasses. He gives them also the leaves and tender branches of the underwood of ash, poplar, and oak, which is cut in the autumn for firewood, and, after being stripped by the sheep, is made up into faggots.

A very long and minute set of directions for shepherds, has been compiled from the works of Daubenton, and published in France, with illustrative plates by Gilbert, under the title of "Instruction pour les Bergers." This book, though containing much useful information to beginners, which might well serve as an example worthy of imitation by some competent writer in this country, abounds in puerilities, which have not escaped the lash of the French critics themselves."

Merinoes crossed with Rylands—Their Superiority.

"In point of size, my Merino Ryeland sheep are at present, equal to the Ryeland. There is no subject which has more divided agriculturalists, than the question as to the comparative profitableness of the larger, or smaller breeds of animals.

At the same time that a small sheep becomes fit for food from a proportionably smaller quantity of keep than a large one, the joints into which he is divided, are better accommodated to the use of common families. In this respect, however, there is certainly a minimum in point of convenience, which I should consider as lying between 14 and 18 pounds a quarter. To this size, wethers of the Merino-Ryeland breed are easily brought. It is well known that a great deal of the success, in this respect, depends on the constant administration of a sufficient quantity of proper food during the whole life, not only of the animal himself, but of several preceding generations. From actual experiment I find that my yearling rams, in the same state of flesh, have gained from 10 to 12 pounds each in weight, during the last three years; and my ram hogs are now (in the month of March) to all appearance nearly as heavy as those of 18[illegible], when six months older. The greatest weight, in the month of September, of a living 4 tooth ram of my flock, in store order, has hitherto been 1[illegible] pounds."

Importance of good Froms.

The capacity of quick growth and early fatness, is generally supposed to be connected with particular circumstances of form and proportion. These circumstances, Mr. Cline, in a paper addressed to this board, has attempted to explain on physiological, and as it appears to me, just principles. He sets out with considering the external form of the animal as being of consequence, only as it is indicative of the internal structure. The power of converting food into flesh, chiefly depends on the relative size of the lungs, which must be proportioned to the mean circumference of the chest of a given form, which should be as nearly as possible circular. This structure will necessarily influence the distance between the shoulder blades, and fore thighs, producing a broad chest. The pelvis in the female, should be wide and deep, for the purposes of easy gestation and labour, and therefore for the production of sound and healthy offspring. On the breadth of the pelvis will depend that of the loin, and the goodness of the hind quarter, which comprises the size and distance of the hinder thighs. From these points must arise a straight back, and large barrel, which regulate the dimensions of the stomach and intestines, and, therefore, the power of taking food. Large bones are no sign of strength, but rather connected with a sort of ricketty disposition, which always implies weakness, and an incapacity of nutrition; besides which they are not the food of man. The smaller therefore they are, the better. This principle strongly applies to the head, which when large, endangers the ewe at the birth. Horned heads are much heavier than those that are hornless. Long legs are only an excess of offal, and require a proportionable length of neck, in order to permit the animal to feed. Muscles constitute what is commonly called lean, and are the instruments of motion. They should, therefore, be full and large.

If these circumstances are true, and their final cause rightly explained, they are resolvable into the general principle of fitness, and therefore, according to the opinion of certain critics, are those points which, so far, justly constitute the beauty of a sheep.

All these points are supposed to be united in the New Leicester sheep; which is, accordingly, exhibited as the ultimate standard of excellence; and therefore as a model of perfect beauty in this species of animals. Let us more minutely examine its pretensions.

Characteristics of New Leicester, or Bakewell Sheep.

The Leicester sheep has a peculiar temper and disposition. He is naturally dull and indolent. He is scarcely sensible when you come near him. Any fence confines him. He never runs about from vivacity, or the love of change. His whole object, the very end of his existence, is to fill his belly.—He moves for food to a short distance all around him, soon satiates himself, and then lies down to rest. From this genius and mode of life, all his food readily becomes chyle, soon fills his vessels, and as is usual in all animals in such cases, is in great abundance poured out of the vessels in form of that secretion which is called fat, and which among other useful purposes, is certainly a wise provision of nature to remove a degree of distension in the vascular system, which might, probably, in various ways, soon become fatal. The animal therefore soon becomes loaded with fat; which at an early period of life, is always deposited in that sort of net work immediately subjacent to the inner skin, called, from its structure, the cellolar membrane, or texture, and from its use, the adipose membrane. It is evident, therefore, that a Leicester sheep, under proper circumstances, is fit for growing fat.

"Very fat Mutton an object of aversion."

"But what is the fitness of fat itself? A certain proportion of it, according to the modes of cookery in England, and I might add, almost in England only, is doubtless coveted by every palate; and a larger proportion is desired by the labouring part of the people, who like it in their broths, their puddings, and with their fried vegetables. But the number of such persons, who are able to purchase mutton, is comparatively small. Among the middle, and wealthier classes of people, and more especially their domestics, very fat mutton on the table is an object of utter aversion. It is indeed, very much to the liking of the cook, who receives, as her perquisite, all which either the fire separates, or the dainty palate leaves uneaten, and sells it as tallow to the manufacturer of candles or soap. The proportion of this mutton so lost, would astonish these who have not seen the immense thickness of fat, which loads the surface of the loins, shoulders, and necks of the prize sheep, so constantly exhibited in large cities, to the great admiration of the gaping multitude. But the tallow of a sheep is always less valuable than the lean, taken in connection with a due proportion of the fat with which it is spread, or interlarded; and, perhaps, for this very reason among others, the Leicester mutton usually sells for common consumption, at a halfpenny, or a penny per pound less than the Ryeland, Welsh, or Southdown."

The fat of New Leicester to their lean as 5 to 1.

"But what, in the Leicester breed, is the nature and proportion of the muscular substance, or lean? Exactly what must happen from their age, and habits of life. The muscles of young animals are always small. They do not attain their ultimate size till adult age. Whatever may be the vulgar opinion as to the Leicester sheep, at the age at which he is killed, he is immature, and his muscles scarcely half grown. Farther, muscles, much used, enlarge; not used, shrink and decay. Hence the leg of a postillion is almost without a calf, while that of a chairman is exuberantly full. Were the strongest man to keep his arm for a year in a sling, experience shows that the muscles would be reduced to less than half their original solidity and bulk. So wild birds, which are much on the wing have plump pectoral muscles, or breasts; while those which only walk, and the former, when domesticated from the egg, have the breast comparatively thin and flaccid. Examine the muscular substance of a Leicester sheep, and you will find it exactly in the same state. I will venture to assert, that the lean of one of these animals, at 2½ years old, weighing 25 or 30 pounds a quarter, is scarcely heavier than that of a Ryeland of proper age, weighing 16 pounds. The fat on the loin of this breed, is to the lean as five or sometimes six to one; and Mr. Marshall quotes an instance of an old New Leicester sheep, the quarter of which, weighing 26 pounds, was reduced to 21 pounds when divested of its fat.

Farther, the red colour of the internal parts of animals, arises from the blood which is contained in the vessels; and the redness of the blood itself depends on the oxygen which it imbibes from the air, chiefly in the process of respiration. Now exercise, by increasing the action of the heart, drives a larger quantity of blood, in a given time, through the lungs, and therefore accelerates respiration. The same cause propels the blood more copiously through those minuter vessels, in which otherwise it would either not exist, or else not be perceived by the naked eye. Hence the blood, and all the parts through which it most circulates, are reddened by exercise. We see this difference in individuals of the human race, who become pale and sallow from indolence, but, from habitual exercise, obtain a clear carnation, and what is called the bloom of health. We see the difference in the common fowl which, when at large, and feeding at the barn door, and in the fields has dark coloured flesh, but which becomes white by domestication and confinement. So in sheep; the muscle of the Welsh, Portland or Ryeland, which run about in quest of food, is brown when dressed, and emits much gravy of the same colour, while the lean of the indolent Leicester is pale, and imbued with comparatively colourless juices. To the same end contributes the age at which the animal is killed. He dies prematurely; for he becomes fat before he is adult; his flesh and juices have therefore the same pallid hue, relatively to those of the full grown Ryeland, that the

the flesh of a calf has to that of an ox. It is acknowledged that the flavour keeps pace with the defect of colour. There can be little doubt that, under the same circumstances of close confinement, and early fattening, the Ryeland or Southdown mutton would be as pale and tasteless as that of the Leicester.

If then the form of that sheep is necessarily connected with his disposition to inactivity, and early proneness to obesity, it is evident that it unfits him from obtaining a large proportion of well flavoured muscular substance.

It is common with all animals to become fat about the internal parts, only at an advanced period of life. When sheep are sold to the butcher by weight, these parts are not usually weighed with the joints and the rest of the carcass, but are considered as belonging to the fifth quarter; and, therefore, as the profit of the butcher. Now if, in this case no deduction be made for its deficiency, the Leicester breed of sheep, which is always killed in its infancy, and therefore, is more defective in this respect than any other breed, is, comparatively speaking, unfit for the butcher. If, on the other hand the butcher, on that account, gives less per pound for the quarters, the loss only changes its object, and the breed becomes, so far, unfit for the grazier."

(*To be continued.*)

COTTON PRESSES.

Dear Sir, *Petersburg, Jan.* 20, 1826.

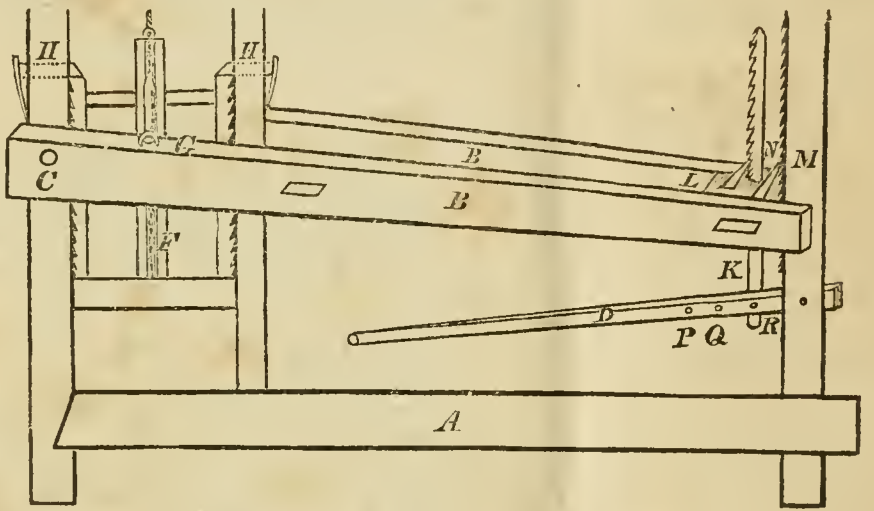
You doubtless recollect an inquiry I made some months since, through the American Farmer, concerning cotton presses, which elicited much useful information upon the subject. But none of the machines described by your correspondents, appeared to me entirely free from defects. After some fruitless efforts on my own part, I concluded to visit this place, the cotton market of Virginia, and where all the experience and information of the state on the subject, is brought to a focus; and by seeing the different machines in actual operation, I should have an opportunity of selecting the one most approved. Having succeeded to my entire satisfaction, I feel it my duty to communicate the result of my investigation, for the benefit of those of your readers who may feel interested, in return for the many useful hints I have derived from your valuable journal.

The points I conceive essential in the construction of a press, are—1st. Its power. 2d. The dimensions; it being very important that it should be secured from the weather, and especially under the same roof with the gin, if possible. 3d. The facility of stowing the cotton in the press box—and 4th. the cost of the machine.

The first press I visited was put up on Layssard's plan, described in a former number of the American Farmer. It requires a space of sixteen feet in length, about two feet in width, and not less than twenty in height; consequently it is not well suited to the interior of a gin house, although that I saw was put up in one. The press box is badly contrived, as the follower cannot be removed; considerable delay must therefore be experienced in stowing the cotton. The power of a man with a nine feet lever in the windlass, gives a pressure of 10,800 lbs. on the bale. From this, however, a considerable deduction must be made for friction. Cost of the machine about $75. It works well.

The next that attracted my attention, was a new application of the screw, a northern invention, which produced beautiful bales. It was in the house, but required an elevation of three stories—the power being applied on the first, the press box occupying the second, and the cotton thrown in on the third, upon which also was situated the blow room. I think it would be improved by working the screw horizontally, on the plan recommended by Mr. Burr, in your paper. The whole operation might then be performed on one floor. It is not susceptible of having the speed increased much in its first pressure, when but little power is required. If worked by a ten feet lever, the hands must walk 840 yards to pack a bale. The machine costs $250.

After seeing several other presses, none of which need a particular description, I had finally concluded to adopt the one first described, as being liable to fewer objections (the cost taken also into consideration,) than any other, when I became acquainted with one lately invented by Charles Williams, (known as the patentee of the rail-way,) which must, I think, supersede all others. This press, it appears to me, possesses every advantage which can be desired. It may be put up in any gin house; is easily worked; simple in its construction; of immense power; loss by friction very little; the press box filled with great facility; and costs, exclusive of the patent right, about $60. It is to this invention, called the "Twin Lever Press," that I would particularly call the attention of your readers. Although not an adept at drawing, I will endeavour to give such a sketch as to make the description intelligible.



A. is the bed, 16 feet long and 21 inches wide—B. B. the twin levers moving on each side of the press box, the fulcrum being at C. and operated on by the second lever D. The follower E. has three upright pieces framed into it, five feet long; the centre one with straps of iron on each side, perforated with holes, into which the hooks G. are made to take as the lever operates. The other two uprights serve a double purpose; first, as guides, to carry the follower down square; and, 2dly. notches being made in the side, two wooden keys, H. H. passing through the cheeks, are made to play in them by a spring, so as to confine the follower as it is worked down by the lever. The lever is operated on by an iron rack K. and pall L.; another rack is made fast to the upright M. which serves to keep down the lever by aid of the pall N. The main lever is to be carried down six times, and by each cast the follower gains one foot. The lever is to be thrown up by a pulley, and at the first pressure, its weight alone will perhaps carry the follower down twelve or eighteen inches. At the commencement the foot of the rack K. is to be fixed at P. giving a leverage of ten inches; as more power is required it is to be moved to Q. affording a leverage of six inches, and subsequently to R. with only three inches leverage. This last purchase gives the weight of one man (150 lbs.) with a lever nine feet long, a power equal to 32,400 lbs. pressure. It is said that one man can complete a bale in one hour. There is also an ingenious contrivance, by which the bale is easily extricated after it is roped—rather a difficult matter with some presses. This done, the follower is to be raised up by a pulley, and laid aside, and you are then ready to begin again.

Since writing the above, I have seen an inquiry in the last Farmer, as to how we *gin our cotton.* This will always be a formidable obstacle where the crop is first introduced. I believe that all my efforts would have proved fruitless, had I not pledged myself to have a machine put up against the ensuing season. This difficulty removed, there was no further hesitation among the farmers to go largely into the crop. However, there are numerous gins, convenient to navigation, on the Western Shore of Virginia, where your cotton may be picked and packed. For the information of those who may be disposed to incur the risk and expense of erecting a gin, I will suggest that the size of the building should not be less than 28 feet square in the clear; to give an easy draught to the horses, mine is 29 feet. Two horses will drive a fifty saw gin; one horse, a gin of thirty. The present price is $24 per saw. Messrs. Sinclair & Moore, of Baltimore, are preparing to make them, and will, I have no doubt, execute the work well. The machinery (iron is preferable,) costs from 60 to $70 complete. I procured mine from the Richmond foundery. If water power can be had, it is to be used by all means, when a smaller house will answer. The saws should revolve about 300 times per minute. The best gins I have ever seen are made in Massachusetts, and known by the name of "*Carver Gins;*" they cost $5 per saw. Having already detained you much longer than I expected, I conclude. Yours, &c.

FRANCIS H. SMITH.

SCIENTIFIC MEMORANDA—APPLICABLE TO RURAL ECONOMY.

(Continued from p. 387.)

Seeds,

Which have acquired maturity in a warm climate, produce plants which come to greater perfection in a colder one, than those which proceed from seeds by successive generations on the same spot. *Knight, M'Kenzie, &c.*

To stop the bleeding of Vines,

Mr. Knight takes four parts of scraped cheese, and one of calcined oyster shells, or chalk burnt to lime [or quick-lime.] This is pressed into the pores of the wood. In this way the longest branches may be taken off at any season with safety.—*Col Hort Mem vol 2, p 261.* Lime, mixed with water to a thick consistence, and applied in summer to the amputated limb or stump of fruit trees, prevents the extravasation of sap.

Urine,

May be used in winter on the currant and gooseberry bush—in summer, upon all vegetables, after it is diluted with two parts of water—and with great benefit. *Idem.* 290.

Composition for Palings, Fences, &c.

Take 1 gallon tar from the pyroligneous manufacture, 1 oz tallow, 2 oz pulverized rosin, melt together, and put on warm. *Parkes' Chem. Ess. vol.* ii *p.* 277.

Varnish for Palings, &c.

1 gall. wood tar, ½ pint rectified spirits of wine; intimately mixed by a gentle heat. *Ibid.* 278.

Lime,

May act as a manure by combining with and dividing the particles of clay, and thus forming a species of marle; by uniting with the oily substances contained in the soil, and rendering them soluble in water; and by absorbing the dews and the rains, and preventing them sinking too speedily into the earth, by which the food of plants is washed from their radical fibres. *Percival's Georg. Ess. vol.* 2, *p.* 99.

Shrinkage of Grain.

Wheat, gathered ripe, lost in 19 days, nearly one tenth of its weight. Barley, in 40 days, lost one seventh of its weight. This took place in September. In October wheat lost, in 21 days, 2 lbs. 1 oz. 15 drs. per bushel of 70 lbs. In January it lost at the rate of 2 lbs 15 drs. per bushel in 31 days. See *Hunt. ib* 177.—And I have found that Indian Corn lost 20 per cent. or one fifth, by measure, from October to April.

Cause of Snow, &c.

The overcharge, (of the air says Dr. White, in frosty weather, with moisture,) when falling from a great height, forms snow in flakes; and from that height which in warm seasons produces mizzling rains, it becomes sleet, but when floating over the surface, the watery particles, too small to be visible, collect upon the ground and leaves of vegetables, and form hoar frost. *Ib.* 460.

Vegetable Putrefaction

Can take place only where there is air, moisture, and a due degree of heat. Water is then decomposed,—vital air absorbed,—heat disengaged, and new combinations formed. *Lord Dundonald's treatise on Agriculture, p.* 28

Apply this principle to the fermentation of dung. We have seen, that of the excrementitious matter of earth, urine alone furnishes an essential element for the gluten of wheat. In my method of constructing cattle yards, the urine of the stock is absorbed by the litter in a concave yard, but as fermentation would dissipate this element, in the volatile form of ammonia, this process is retarded by a good covering of litter in the spring, which excludes two of its great agents—air and heat—until the dung is carted to the field and ploughed under the soil.

Fermentation

Is detrimental to plants when it is produced by substances in contact with the roots, stems or branches, and often, either by the heat, or by the effluvia emitted, causes disease and death. *Rep. of Arts, vol.* 25, *p.* 172

Hence the impropriety of using unfermented dung in planting trees or shrubbery, or with crops of small grain. In the latter it produces much straw, generally affected with rust or mildew, but little grain, and that of inferior quality. And hence too, the impropriety of applying it in shovels-full or masses to hoed crops, in hills or drills. Though the rule admits of exceptions: for Indian corn, ruta baga, potatoes, beans, and most of the hoed crops, are coarse feeders, and are never injured by the heat or effluvia of unfermented dung, when it is spread broadcast and ploughed under. Those crops thrive on the heat and effluvia which would injure the wheat and barley. From these considerations we derive additional reasons for substituting fallow crops for naked fallows; and of giving to them all our manure in an unfermented state.

Dung,

Or other cause of fertility, increases wood and foliage, but generally retards fructification, or disinclines a plant to mature its fruit or seeds. *Ibid.*

To perennials, this holds good. But in regard to annual plants, it is liable to the same exceptions as the preceding. There is little danger of our farmers applying manure to the maize crop in such excess as to injure the seed.

To promote the puberty of apple and pear trees.

John Williams planted in pots, in Nov. 1809, transplanted after midsummer the following year into the open ground; transplanted again in the autumn of 1811, six feet apart—pruned away every winter the trifling lateral shoots, leaving the large laterals at full length to the bottom of the plants, and gave a good exposure to the sun. At the height of six feet the branches ceased to produce thorns.

One yielded fruit at four years old, and several at five and six years.—*Rep. of Arts*, 1819, *p.* 175.

HORTICULTURE.

From the Westminster Review—London.

HISTORY OF ANCIENT AND MODERN WINES.

By Alexander Henderson, M. D.

(Continued from page 390.)

We now proceed to the history of modern wines. The introductory chapter comprehends some very judicious remarks on the imperfection of chemical science when employed to explain the phenomena of fermentation, or the various qualities of wines, as affected by that process; and the want of words in all languages, particularly in the English (from ours not being a wine country,) to express with accuracy the chief distinctions of wines, and the different shades in their sensible qualities. One term, of which it is essential to acquire and retain a clear and definite idea, is flavour, which Dr Henderson uses "to designate that full impression on the palate which is made by a wine or any other fluid, when the sense of smell is entire, and which, therefore, conveys some idea of a combined conception of both organs"—p. 135, note.

He then explains the principles on which he means to classify modern wines, and the characters of the more perfect wines. In good wines a perfect compound should be formed, in which neither the aqueous, acid, saline, mucilaginous, extractive or aromatic principles, or the alcohol, ought to predominate; but this compound should have its distinct and peculiar flavour, full and entire, not cloying on the palate, or leaving any unpleasant after taste. In the manufacture of certain wines, however, this species of excellence is sacrificed in order to obtain particular qualities, as briskness in Champagne, in which carbonic gas predominates, and carries with it, when it escapes, much of the alcohol and aroma. The sweet wines depend for their grateful and peculiar properties on the abundance of undecomposed saccharine matter; and the high aroma of Burgundy, for which it is so much prized, is obtained by the sacrifice of its vinous attributes.

Dr. Henderson next examines the comparative perfection of the red and white wines; and the intermediate colours, claret, pale yellow, &c., the distinction between the fine and the ordinary, and the effects of keeping on each. He concludes this chapter with referring to France as furnishing some of the best specimens of wine in each class, and unquestionably excelling every other region of the globe in the manufacture of red wines in particular.

The second chapter, which treats of the wines of France consists of some preliminary remarks on the introduction and spread of the vine in that country; the quantity of land at present under its culture; the different modes of cultivating and draining it; the changes that have taken place in the reputation or the qualities of different wines; and the probable or ascertained causes of such changes. "At present," he informs us, "the growths of the ancient provinces of Champaigne, Burgundy, Dauphiny, and the Bordelois, are decidedly the best." Some of the sweet wines of Languedoc and Roussillon rank also very high; but, in general, they are more distinguished by strength than flavour. To the wines of these territories, therefore, and only to the best wines of these, Dr. Henderson directs his attention in the five sections into which he divides this chapter. Before, however, we proceed to examine these sections, we shall offer one or two preliminary remarks. We have seen that, at the period of the vigour of the Roman empire, the vine had barely passed into the southern provinces of Gaul, and into Spain. Germany, and the remainder of Gaul, were ignorant of it. In the fourth century we have the evidence of Ausonius and Eumenius, as quoted by Dr. Henderson [143 and 218,] that the banks of the Soane and of the Moselle produced abundance of excellent wine. Whence this rapid extension of the vine towards the north? Did it arise from the amelioration of the climate, or principally from other causes? We think little, if at all, from the first cause. Strabo, indeed, expressly states, that in his time (the commencement of the Christian era) the cold was so intense beyond the Cevennes that grapes seldom ripened, and it was thought impossible to make wine in those parts of Gaul [p. 143.] Cutting down forests, draining land, and other agricultural improvements, are the only causes in the power of man, by which a climate can be ameliorated. but, at this period, when agriculture was little understood, and especially while the circumstances of the Roman empire prevented much attention from being paid to it, we cannot suppose that, in the course of three or four centuries, the climate would be so far ameliorated by cutting down the wood, draining land, &c. as to give to the latitude of 49°, the climate of the latitude of 45°, for such is the difference of latitude between the Cevennes and the Moselle. We know of no other cause, either natural or artificial, which could ameliorate the climate; and, therefore, we think we are justified in ascribing the extended culture of the vine four degrees further north, in the course of the third or fourth centuries, principally to the taste for its produce, introduced among the Gauls and Germans, which stimulated them to attempt what previously had been deemed impracticable. That the vineyards of France, however, were not very abundant, nor the use of wine very common in the fourth century, we think is apparent from the epigram of the emperor Julian, in which Gaul is represented as obliged, for want of the grape, to drink paltry beer. Unless beer had been the usual beverage with those with whom the emperor was likely to associate, we can hardly suppose he would have noticed the circumstance, or written the epigram.* The establishment of Christianity, and the subsequent foundation of chapters and monasteries, contributed much to the extension of vineyards, their good cultivation, and the superior quality of the wines. In the charters and writings of the sixth, seventh, and eighth centuries, vineyards and vintages of the monasteries of France and other countries are frequently mentioned †

The great variety and the excellency in general of the French wines, as well as the care, skill, and judgment with which their vineyards and vintages are managed, have very properly induced Dr. Henderson to divide his second chapter into five sections. In the first he treats of the wines of Champaigne: these, as early as the ninth century, were divided into the river and mountain wines; the former for the most part white, the latter red. Many do not effervesce, those which do slightly are the best; the white are superior to the red. Among these Sillery has the first rank; it is, when genuine and good, dry, still, of a light water colour, with considerable body: its flavour something like that of the first growths of the Rhine. The best white wines are supplied from the banks of the Marne; in general they degenerate as they recede from the river. The vintages of Hautvilliers and Ay are the most esteemed; the former Dr. Henderson pronounces to be "an exquisite liquor, lighter and sweeter than Sillery, with a delicate flavour and aroma, like that of a pine apple." All the good wines of Champaigne will keep in cool cellars for ten or twenty years. the vaults in which they are stored are thirty or forty feet deep, of calcareous tufa. The soil best suited to the vineyard is calcareous; indeed volcanic, calcareous, gravelly, rocky, dry, and open soils, in all countries and climates, produce the best wine. The best growths of Champaigne are all consumed in France.

We are surprised that Dr. Henderson has not noticed the allegation that sugar is employed in making the brisk Champaigne wines whenever the grapes do not ripen thoroughly.‡ Dr. Clark stated in the first edition of his Travels. from inquiries he made on the spot, that such was the case. The French translator of his work denied it: in consequence of this, Dr. Clarke published in his fourth edition, communications he had received from Messrs. Moett and Co., the principal persons concerned in the fabrication of the Vins d' Ay et Epernai, in which they acknowledge that a liqueur, of which sugar was an element, was used in those years when the grapes did not arrive at maturity; but that the wine manufacturers kept the fabrication of the liqueur a secret, and did not wish that even its use should be known. —Dr. Clarke's *Travels*, 8vo. vol. i. p. 264.

The second section relates to the wines of Burgundy. These Dr. Henderson considers, in some respects, as more perfect than the Champaigne wines. "In richness of flavour and perfume, and all the more delicate qualities of the juice of the grape, they unquestionably rank as the first in the world" [p. 161.] But, as the prime growths are confined to a few vineyards, and all consumed in the country, we have little idea in England either of their excellence or variety. They are produced in the greatest excellence, in the departments of Côte d Or, Yunne, and Saône, and Luireæ. In the Côté d Or, the choicest red growths are the Romanée, Conti, Clos Vougeot,Chambertin, Richebourg, Romanée de St. Vivant, Tache and St. George. These, according to Dr. Henderson, "are distinguished by their beautiful colour, and exquisite flavour and perfume, combining, in a greater degree than any other wines, the qualities of lightness and delicacy with richness and fulness of body." The other red wines are those of Volnay and Pomard in the vicinity of Beaune, the former light and delicate, the latter of more body. The Macon rank next to the Beaune wines. The white wines of Burgundy, less numerous than the red, are not inferior to them in flavour and perfection. The Mont Rachet wine, near Beaune, is the most celebrated: it has a high perfume, and an agreeable nutty flavour.

The third section relates to the wines of Dauphiny. the Lyonnais, and the country of Avignon. On a granite hill, on the left bank of the Rhone, near Valence, are the famous vineyards of the Hermitage. The grapes are not treated in the most careful manner: hence their acescency, and the loss of a portion of their alcohol and aroma. In the department of the Rhone, the wines of Coté Rotie take the lead. A sweet wine, made in small quantities from the ripest Hermitage grapes, in flavour and perfume resembles the best Constantia.

The fourth section comprehends the wines of Languedoc, Roussillon, and Provence. Though the climate of this part of France is peculiarly favourable to the vine, and the soils for the most part equally so, no excellent red wine is produced here. This arises from the flavour and aroma being sacrificed to ensure the complete developement of the colouring matter. The sweet white wines, however, from the richest and ripest grapes, are of a very superior quality: there are the celebrated Muscadine wines of Frontignian, Lunel, and Beziers in Languedoc, and of Rivesaltes, and Salces in Roussillon. That of Rivesaltes, Dr. Henderson says, is the best muscadine wine, not only in Roussillon, but in France, or perhaps in the whole world: when sufficiently matured, "it is of a bright golden colour, and has an oily smoothness, a fragrant aroma, and a delicate flavour of the quince, by which it is distinguished from all other wines."

(*To be continued.*)

LADIES' DEPARTMENT.

[It is a remarkable fact, which does not redound to the credit of the country, that amongst the great number and variety of periodical and other publications, from the ponderous quarterly to the lightest and most trivial of our weekly or daily journals; all are dedicated to the amusement and business of *men*—scarcely a type is set with a particular view to the best formation of the female mind and character in early life, or to edify and improve them in the exercise of the social relations and more venerable duties of maturer years.

It is too obviously the fashion to regard women as beings formed merely to subserve the pleasure and convenience of man, rather than to be his companion, with equal rights, and his friend, with intellect and character fitted to deliberate and advise with him on all his concerns. Of a woman of superior character it has been said, that "she wished her children to obtain intellectual refinement, possess fully the attributes of a rational nature, and to be as far removed as possible from the condition of stocks and stones, by accumulating a magazine of thoughts, and by a rich and cultivated sensibility." This honourable wish of a noble mother of ancient times, according to existing habits and systems of education, seems to have existence, now-a-days, where it does practically exist at all, only in relation to the *male* children of the family; whilst the young ladies, instead of being reared in the acquisition of useful knowledge, and the cultivation of appropriate literature for its own sake, and to qualify them for the most sacred and honourable of all duties, that of instructing their offspring in early youth; are brought up as if destined by providence to spend the first half of their lives in acquiring the arts and the graces of the toilette, and of personal exhibitions; and the other half in the cares of the nursery and the regulations of the kitchen.

So far as our humble influence can be exercised through a corner of this journal, we shall continue to employ it, in presenting subjects for the rational amusement and instruction of our female readers, more especially matrons; and if we sometimes eke out an additional column for their use, the gentleman farmer who objects to it as intrenching on his grounds, will please send his—*name.* The selections we shall offer must be from casual readings, which, from constant occupations otherwise, are of too limited range; we invoke, therefore, the aid of ladies of taste and observation, from whom we shall be glad to receive contributions for their own department. To one of great worth and intelligence we are indebted for the following:]

CONJUGAL HAPPINESS—ENHANCED BY HAVING CHILDREN.

"Never shall I forget (says a fond husband) the interview between us immediately subsequent to her first parturition, the effusion of soul with which we met each other after all danger seemed to have subsided, the kindness which animated us, increased as it was by ideas of peril and suffering, the sacred sensation with which the mother presented her infant to her husband, or the complacency with which we read in each other's eyes a common sentiment of melting tenderness and inviolable attachment!

"This, she seemed to say, is the joint result of our common affection. It partakes equally of both, and is the shrine in which our sympathies and our life have been poured together, never to be separated. Let other lovers testify their engagements by presents and tokens; we record and stamp our attachment in this precious creature, a creature of that species which is more admirable than any thing else the world has to boast, a creature susceptible of pleasure and pain, of affection and love, of sentiment and fancy, of wisdom and virtue. This creature will daily stand in need of an aid we shall delight to afford; will require our meditations and exertions to forward its improvement, and confirm its merits and its worth. We shall each blend our exertions for that purpose, and our union, confirmed by this common object of our labour and affection, will every day become more sacred and indissoluble.— All this the present weakness of my beloved M——, would not allow her to say. But all this occurred to my reflections; and, when we had time tranquilly to compare our recollection of the event, it plainly appeared that in all this our hearts and conceptions had most truly sympathised.

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* This epigram may be found in the Leipsic edition of the Greek Anthology, Epig. 368; and also in the preface to Juliani Opera, Paris, 1641, 4to. We are aware that this Epigram, and another on an organ, have been ascribed to a Julian prefect of Egypt, and not to the Emperor:—but a prefect of Egypt could have nothing to do with Gaul, whereas Julian spent the early part of his life there.

† Lupus, who was abbot of the monastery of Bethlem, in Burgundy, in the middle of the ninth century, frequently mentions his vintage in his letters; it seems often to have failed, on which occasions perry was used.— [Lupi Opera, p. 161, &c.] In the charters for founding monasteries about the same period, vineyards are always particularized [pp. 510, 527, 530, &c.] English lead was in much request at this time for covering the roofs of monasteries [pp. 32 and 348.] Gregory of Tours, who lived in the twelfth century, mentions two Touraine wines, as brought forth only on great occasions or to high personages, Laticin and Gaticin; but what they were, or where grown, cannot be ascertained. Vol. i. p 472, and note; and Vol. ii. p. 307 —Old French Translation, Paris, 1678.

‡ Dr. Henderson, indeed, states, in a cursory and incidental manner, in a passage we shall afterwards quote, "that, in order to preserve their sweetness, and promote effervescence, the manufacturers of Champaigne commonly add to each bottle a portion of syrup, composed of sugar-candy and cream of tartar; the highly frothing kinds receiving the largest quantity" [p. 354.] But Dr. Clarke's allegation, and the authority on which it rests, go much further; according to them, the best judges cannot distinguish between the natural and artificial Champaigne—between that made from grapes perfectly ripe, without sugar; and that made from immature grapes, with sugar.

The possessing a third object, a common centre of anxiety to both, is far from weakening the regard of such a couple for each other. It does not separate or divert them; it is a new link of connection. Each is attached to it the more for the sake of either; each regards it as a sort of branch or scion, representing the parent, each rejoices in its health, its good humour, its smiles, its increase in size, in strength and in faculties, principally from the idea of the gratification they will communicate to the other. Were it not for this idea, were it possible the pleasure should not be mutual, the sentiment would be stripped of its principal elevation and refinement; it would be comparatively cold, selfish, solitary and inane."

A MOTHER'S LOVE.

Her, by her smile, how soon the stranger knows;
How soon, by his the glad discovery shows,
As to her lips she lifts the lovely boy!
What answering looks of sympathy and joy!
He walks, he speaks in many a broken word;
His wants, his wishes, and his griefs are heard:
And ever, ever to her lap he flies,
When rosy sleep comes on with soft surprise,
Lock'd in her arms, his arms across her flung
(That name most dear for ever on his tongue,)
As with soft accents round her neck he clings,
And, cheek to cheek, her lulling song she sings.
How blest to feel the beatings of his heart,
Breathe his sweet breath, and kiss for kiss impart;
Watch o'er his slumbers like the brooding dove,
And, if she can, exhaust a Mother's love!

[*Herald.*

THEY POURED THE RED LIBATION FORTH.

They pour'd the Red Libation forth,
And fill'd the golden bowl;
I dash'd it on the famish'd earth,
And spurn'd its base control;
And said—no more my peace shall be
A victim to thy treachery!

They wove of Fame the blooming wreath,
My brow the chaplet twined;
My foot I trod the flowers beneath,
And gave them to the wind;
And said—my heart no more shall trust
To that which is itself but dust!

They brought me Beauty's child, and gave
To me her fairy form:
Death came! She fill'd the silent grave;
Fed on her cheek the worm:
I loved, yet said—no more will I
O'er flower so frail, in sorrow sigh!

They brought me then a spirit sweet—
Religion, ever fair;
My tears bedew'd her holy feet,
My soul arose in prayer,
And said—Fame, Pleasure—all farewell!
Blest spirit! thou hast broke their spell!

[*British Press.*

MISCELLANEOUS.

JOURNAL OF A TRAVELLER TO LOUISVILLE.

DEAR SIR, *Louisville, Ken. Jan. 8, 1826*

In travelling from Baltimore to this place, entirely by land, a distance of nearly seven hundred miles, I hoped to have made some observations of sufficient interest to merit a place in the Farmer, but really our coachman rattled us on with such amazing velocity, that we found it absolutely necessary to enlist the exertions both of mind and body for the preservation of our safety and comfort. Were I to quote the language of the poet, and say—

———"Tho' every bone is aching
After this terrible shaking,
Over ruts and ridges,
And old plank bridges," &c.

It would give you but a faint idea of the bodily suffering I endured, in travelling from Baltimore to Wheeling, and from thence to Cincinnati in a stage coach.

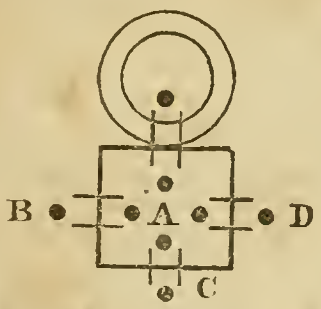
The crops of small grain on the whole route, are extremely backward and unpromising, owing to the severity of the drought, which has in many instances compelled the farmer to plough up and re sow his fields. It is every where admitted that the season has very much diminished the quantity of grain fallow, and in all probability this will be a hard year with the farmer whose principal crop is wheat. I think Volney has somewhere predicted that the United States at some future period will become a miserable country on account of the scarcity of rain; and really the summers of 1822 and 1825 serve at least to remind us of the prophesy.

The farms and the public houses, particularly on the national road, have very much improved during the past year; and it is now so thickly settled that the traveller can always obtain comfortable accommodations within the compass of a few miles. I know not, however what the feelings are, of the members of Congress from the west, in passing over this beautiful public work, but to me its gradual, yet progressive decay is always productive of extreme regret. The appropriation by Congress three years ago, seems to have been judiciously expended, but the amount was too limited to produce any permanent advantage; and a very shrewd old farmer, of whom I was making inquiries on the subject, illustrated the erroneous policy of the government in this particular, by relating an anecdote of one of his neighbours, whose parsimony he said, induced him to sow one bushel of wheat on ten acres of land. The stone bridges, some of them costing the country upwards of thirty thousand dollars have been wretchedly dilapidated by mischievous foot pads, who have in many instances thrown over the stone from the walls of these bridges even with the surface of the road. The stage drivers in the United States, are equally proverbial with the barkers for loquacity and mirth. One of these humourous fellows told us an amusing anecdote of two gentlemen, who, at a distance, noticed a traveller on foot, very busily engaged in throwing over the stone from the wall of one of these bridges, and according to the driver's account, he looked as much pleased and astounded at each crash, as if he were witnessing not only "the wreck of matter," but "the crush of worlds." The gentlemen continued patient until the ruffian had sufficiently amused himself, and was several miles on his journey, and then putting the spur to their horses they soon overtook him, and at the end of the lash, compelled him to return, and in the language of the driver "made a Baptist of him in short order." The ceremony of his confirmation being over, the new convert to the church was soon initiated into the practice of good works likewise, and these were no less a performance than the immediate restoration, up a steep bank in a warm summer's day, of the very identical stone he had so lately tumbled over with so much apparent pleasure. This you will say was an arbitrary mode of preventing future injury, but should it not teach the several states through which the road passes, to enact efficient laws for the protection and for the punishment of such offenders. Near one of these bridges some private individuals have erected a very costly monument to Mr. Clay, in commemoration of the active part he has taken in the good work of Internal Improvement. The monument appears to have been designed in excellent taste, and the character of the execution is both skilful and ingenious, but it is so miserably shattered and pelted with stones, as to indicate a more than Turkish barbarism.

The national road through Ohio is graded as far as Fairview, a distance of thirty miles, and a great portion of the stone is in readiness for the covering. The road, as you know, is to be constructed on the plan of M'Adam, the great Colossus of Rhodes (roads,) as he is called in England. The bed is of the usual width, the pavement to be eighteen inches thick, and none of the stone to weigh more than three ounces. This latter item in the formation of the road, has, I am told, very much deceived the contractors, who had no correct idea of the labour of reducing the stone to such small dimensions. We were shewn a new machine at one of the factories near Wheeling, which is intended to facilitate this operation. It is a large iron mortar with strong iron bars at the bottom, just wide enough apart to allow the stone to pass through when broken of the proper size. An excellent policy has been adopted in limiting the contracts for the construction of this road to the distance of one mile; and the consequences of this arrangement are the certainty of the performance, and the more speedy and faithful execution of the work. The faith of the nation being pledged, in a few years more we shall have a national road from the waters of the Potomac to the town of St. Louis, on the Mississippi; and is it not delightful to contemplate the completion of a public work of so much general benefit and advantage.—The facility of transportation to Baltimore has already induced many farmers in Ohio to commence the cultivation of the fine Tobaccoes, and I am informed a very extensive effort is making to increase this year, the production of that staple. From one hundred miles in the interior of Ohio, tobacco is transported to Baltimore at two dollars, and two dollars and fifty cents the hundred; and a very intelligent gentleman was telling me of an instance, strongly illustrative of the shrewdness and enterprize of a young merchant in your city, of the society of Friends, who came out last year and purchased a considerable quantity of this tobacco at a very low rate, and is expected out again this winter, in pursuit of the same object.

The whole state of Ohio, so far as I was enabled to judge from passing over the great mail route, presents a scene of improvement most rapid and judicious, and not surpassed, if equalled, by any other section in the United States The towns are all beautifully situated, well laid out, and the buildings, generally speaking, of the most permanent and valuable description. The salt works near Cambridge and Zanesville, are said to yield a handsome profit to the owners, and are of great public benefit to the state. These works produce from twenty to fifty bushels of salt per day, the streams are copious and strongly impregnated, and the wells from two to five hundred feet in depth. I am told borings at these depths will find abundant salt streams in almost every part of the table land of the state, and particularly on the river border, where no attempt of the kind has yet failed of success, or in bringing to the surface fine abundant streams. You may think me a little visionary, but with this capacity of finding water on the margin of the river, might it not be practicable at no very enormous expense to keep a sufficiency of these springs in constant flow as would furnish an adequate supply of water at any season of the year, for all the purposes of health and navigation When the river is low some hundred thousand of these borings would furnish an immense quantity, and when high, the wells being of small diameter, the water might be stopped, and forced to flow through their original subterranean passages until the next drought should render their aid again necessary Badinage apart—our natural and artificial capacities are so great, that it is impossible to conceive the extent of improvement which art, patriotism and enterprize, (untrammelled by constitutional scruples,) will at some future day lead the wise ones of this nation.

The little village of Circleville is one of classic memory in Ohio. It is remarkable for the extent, number and extreme regularity of its ancient mounds and fortifications which are constructed with more regard to nicety and beauty, than any others in the western country. The plans and figures of these works are thus:



Two perfect figures, a square and a circle, each laid out with mathematical precision, and each containing by actual and accurate survey precisely ten acres of land. A is a passway leading from the square into the circle, and B C D three doors or passways leading from without into the square. It is remarkable that each of these passages is guarded by mounds both from without and within, such as are represented in the figure by the black dots, which were evidently designed as protections to these entrances. The height of this breast-work or fortification, was originally twenty feet, and the circle consists of two perfect figures of this elevation, and nearly touching at the base. The square was evidently regarded by the original projectors of the work as the most vulnerable position, and therefore, the circle was doubly fortified, and contained only one passway for the double purpose of defence and security. The village of Circleville derives its name from these works, the town being situated within the circle, and the court house standing in the centre of that figure. Before the village was built, trees were growing upon these works equally large with any others in the forest, and by whom, and when they were constructed, remains a question not to be solved by the most curious and inquiring mind. The works have, however, been much injured and thrown down, and barbarous as it may seem, the walls have been much destroyed by carting away the earth for the purposes of brick making.

Lebanon is a beautiful village and remarkable for two things, its excellent Hostel (or Hotel) as it is spelt in the United States, and as being the former residence of our worthy post master general.

Cincinnati is one of the most flourishing cities in our country. The town was laid out in ninety-four and contained in 1801, 2500 inhabitants; and the best lots on Market or Main street, were worth at that time, 1 dollar the front foot. In 1825, this town contains 15,000 inhabitants, has built within twelve months, sixteen steam boats; and Market street lots are selling for two hundred dollars the front foot. What this town will become in a few years more, when the canals are completed, is a source of much speculation. The state of Ohio, although in comparative infancy, has already projected 360 miles of canalling, which agreeably to the estimates, will cost upwards of four millions of dollars. One hundred and sixty miles of this distance, is now under actual contract and in a state of rapid advancement. The contracts have generally been taken under the estimates of the commissioners, and it is pleasing to notice the universal popularity of the measure which must secure to the state the accomplishment of one of the greatest works of the age in which we live. For the completion of these great national schemes, the state has pledged a fund for the payment of the interest, and I have no doubt the loans will at no very distant day be redeemed without leading to any public pressure. The summit level from Lake Erie is 370 feet, and from thence to the Ohio at the mouth of the Scioto river, 400 feet. The bed of this canal will in general pass over a soil extremely favorable to the contemplated object. At the depth of six or eight feet from the surface, the canal will on a great part of the route, pass over a bed of gravel and clay, which I am told is the best description of earth for preventing the loss of water by absorption. There is a report in circulation, but I cannot think it true, that the commissioners and engineers in their views and calculations in regard to this canal, have allowed no more for absorption and evaporation, than is generally found to be customary in Europe. If this should be the case, unless the feeders are at all times more than sufficient, the error may at particular seasons of drought, occasion some disappointment in the general economy of the supply. The canal from the Miami to enter the Ohio at Cincinnati, will embrace a distance of sixty miles, over a surface infinitely more favorable than that from Erie, and the whole being under active contracts, the work is very rapidly progressing. What an example of national enterprize and energy do these great works hold out to the United States—to each individual state of the Union, and more particularly to our beloved soil of Maryland, where some fiend-like charm has heretofore operated in defeating the performance of any work of similar importance.

Kentucky too in spite of her depreciated currency, has commenced the good work, and a company has been incorporated by the state, who have disposed of stock to the amount of 400,000 dollars for the cutting a Steam-Boat Canal from the town of Louisville to Shippensport, a distance of two miles below the falls of the Ohio. The contract has been taken by some gentleman from New York, at 380,000 dollars, exclusive of locks, and it promises to eventuate in a beautiful work. The canal will be twenty feet deep, sixty feet wide at the bottom, one hundred and forty at the surface, while the sides will be protected by a stone pavement to guard against the agitation produced by the wheels of the boats. Should not these wise undertakings produce a change in the opinions of those members of Congress, and particularly of the Senate, who so obstinately oppose the propriety of such works, on the part of the general government.*

At Cincinnati I met with Mr. Owen, of New Lanark, and attended his lectures in explanation of his principles and of the condition of the community he is endeavouring to establish for the melioration of the human family. The great peculiarity of Mr. Owen's Theory, is founded on the old idea of Hume and other sceptics, that man is not a free agent.

[Here our friend indulges in some remarks upon the religious principles and character of Mr. Owen, which we think it better to omit. It would be unfair to admit an *impeachment* and reject a *defence;* and were Mr. Owen to demand, as he might justly do, the right of explaining his doctrines, we should find our journal employed as the medium of controversy on a subject not at all connected with the objects of the American Farmer. For remarks upon the general state of any portion of the country, its productions, natural and artificial; the public works and private establishments connected with its agricultural interests, we are always obliged to our correspondents, but in religion and politics, we never interfere in this place.—Let every man enjoy his opinions in the one and the other without "let or hindrance." Let him worship God in his own way, so he disturb not the peace of society, and at the polls vote his own ballot.]

The waters of the Ohio are extremely low, and we shall probably have some difficulty in descending, but this you will say is all to be removed when my theory of artificial rivulets shall prevail. If any thing of interest should occur in the voyage down the father of rivers, I will have the pleasure to communicate with you. Yours, &c. S.

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* This question we leave to our correspondent to elucidate through some other channel.—[Ed.]

SPORTING OLIO.

STUD BOOK.

Mr. Skinner,

A gentleman of the South of Virginia [one of the most extensive breeders of Horses in the U. States,] has been many years employed, at vacant hours, in compiling, for his own use and amusement, a Stud Book; comprising most of the Virginia horses, mares, &c. previous to the revolution; whether imported or home-bred; many of those in the Carolinas and Maryland; and some in New York, of the greatest distinction: also, the more notable blood horses during the war of 1776, and subsequently thereto. Profit is no object to him—but, believing such a work to be a *desideratum* to breeders, sportsmen and amateurs, he wishes to be enabled to form a tolerably correct estimate of the number of copies which he may order to be struck off, without incurring loss.

Such persons, therefore, as feel a disposition to have the work, are respectfully requested to indicate the same (as *promptly as practicable*) to the Editor of the "American Farmer." But they are at the same time apprized, that this is not a "prospectus of proposals for publication, to which any one is solicited to *subscribe;*" or, in other words, a mode of begging, which has been most extensively and shamefully practised, and which is beginning to get into deserved disrepute. Nobody will be *dunned with a book.* It will be sent to no one whatsoever; a limited number of copies will be printed, which they who will, may buy. The work will be a thin octavo; and it is believed that it will embrace a mass of authentic information that is in the possession of no other person living, but the compiler; who has been occasionally employed for more than thirty years in collecting it.

Valentine's Day, 1826.

The "Stud of a gentleman of the South of Virginia."

In the American Farmer of April 9th, 1824, you published "the Stud of a gentleman of the South of Virginia," who is an amateur, it would appear, if not a connoisseur of horses. Herewith you will receive a list of the foals dropped last season in that stud, which, if worthy a place in your journal, you will please to insert therein. Philip.

N. B. The numbers refer to those in the American Farmer above quoted.

1824. *got by Roanoke.*
March 19, b. c. out of Grand Duchess, (No. 11,) (star and snip,) sent to Pennsylvania with his dam.
April 5, b. c. — Y. Minikin, (No. 10) off hind foot white—very fine.
9, b. c. — Miss Ryland, (No. 8) fore feet and off hind foot, white—star.
11, b. c. — Y. Frenzy, (No. 9) near hind foot white.
b. c. — Statira by Alexander the Great, (No. 5.)
b. c. — Lady G. by Hambletonian, (No. 3.)
b. c. — Everlasting.

No note (here) of the marks of these last, and there are some others not included in the above list;

1825.
March 20, b. c. out of Witch, (No. 16) by Roanoke.
22, b. c. — Roanoka, (No. 13) do.
April 8, b. f. — Minikin, (No 10) do.
17, b. f. — No. 27, (by Gracchus out of No 1) do.
24, b. c. — Philadelphia, (No. 4) by Sir Archy.
26, b f. out of a bay mare by Sans Culottes, dam by a son of Flag of Truce not in the list of 1824, by Roanoke.
26, b. f — Amy, (No. 34) by Roanoke.
28, b. f. — Roxana, (No. 33.)
30, f. — Lady Bunbury, (No. 2) by Sir Archy.
— own sister to Roanoke, (No. 21) do.
and Angelica, (No. 39) do
May 1, b. c. out of the dam of Jenny Deans, (No. 15) . . . . by Roanoke.
6, b. f. — Wildfire, (No. 14) do.
10, b. c. — Wildfire's dam, (see 14) do.
19, b. f. — Wakefield, (No. 28) do.
23, b. f. — Paroquet, (No. 24) do.
29, b. f. — Shylock mare No. 19, (Jessica.) do.
June 28, br. c. — the dam of Dumpling, (No. 23) do.
March 13, b. f. out of No. 22 (at B F.) do.

April.
b. f. — No. 29 (Never Tire)
b. f. — sister to No. 29,
b. c. — Young Frenzy, (No 9)
gr. c. — Miss Ryland, (No. 8)
} AT F. Q. } do.

b. f. — Blue Ruin, (No. 18)
b. f. — Young Grand Duchess, by Sir Archy out of Old Grand Duchess, (No. 37)
b. c. — Young Minikin, (No. 38) by Sir Archy,
b. c. out of Arch-Duchess, (No. 20)
} AT M. Q. } do.

N. B. The imported mare Lady G. by Hambletonian, (No. 3) missed.

The Alexander mare, (No. 5,) Duchess, (No 1,) and Lady Bunbury, (No 2.) are dead.

The No. 23 was stolen, heavy in foal, last winter.

Old Grand Duchess, with her b. c by Roanoke, (the produce of 1824,) is sold to a gentleman in Pennsylvania—covered by Roanoke that spring. No. 17, and No. 27, are sold to a gentleman in Frederick county, Virginia.

Roanoke, (No. 21,) who has covered but two seasons, and then only was suffered to be let to his owner's mares, and two or three others belonging to that gentleman's friends, stands as a public stallion for the first time, this year, at Roanoke. He has proved himself to be a fine foal getter—is full sixteen hands high, of immense power, strongly resembling his sire, but it is a handsome likeness. Never had horse a finer temper. He is a deep bay with black legs, mane and tail, and what is remarkable, he gets only bays, and those out of mares that never brought any thing but greys or chestnuts to any other horse, Sir Archy, his sire, excepted. Like his sire, he is fit for the dray, wagon, or coach, as well as the turf, the field and the road—in short, for every purpose to which this noble animal can be applied, but that of a shooting pony.

In England, one hundred and one horses had been entered for the Doncaster St. Leger stakes, twelve more than had ever been entered before.

THE MULE—AN ANECDOTE.

Dr. W———, of Barbadoes, on the death of his faithful riding mule, caused his head to be suspended just over his own seat in his dining room, where it long remained a monument of *worth* and *gratitude*. The benevolent and hospitable physician, after the madeira had made a few circuits, was much in the habit of "lecturing on the head" of this departed friend "from whom his liberal fortunes took their rise," and always with much applause.

One unlucky day, while engaged in this pious office, Fate's *scissors*, Time's scythe, or something else, causing the lashings to part, this venerated relic fell on the bare pate of the Phrenologist with such force as to prostrate him on the floor. His old black servant used to give a minute and most pathetic account of this sad affair, always, in proof of his own sagacity, concluding—"umph—I always tella massa he mus *neber trus mule*—mule mighty unsartin; *he be shore a do you a mischief some time or udder*."

THE FARMER.

BALTIMORE, FRIDAY, MARCH 3, 1826.

☞On the subject of tobacco, our Planter friends will be expecting to hear from us as the spring opens, but we are constrained to say that we have nothing cheering to communicate. By the last advices from abroad, there were few or no sales making, and the prices there are said not to justify those paid in this market in the months of September and October last. Here there have been no late transactions worthy of particular notice.

☞Distillers complain of a scarcity of *rye*, and are offering sixty-five cents for that which is good and clear of garlic.

☞Corn sold in Charleston on 20th February, at $1 per bushel; demand brisk—supply slack.

BLOODY MURRAIN.—A decoction of cedar berries and boughs, is said to be an infallible remedy for this disorder in cattle.

☞At the late session of the Legislature of Delaware, a company was incorporated for *planting mulberry trees and raising silk worms*. The capital of the proposed company is fixed at $20,000, but it may go into operation when $5,000 are subscribed, and fifteen per cent. thereon paid in.

☞MARSH MUD AND RICH ALLUVIAL SOIL.—Some of the good people of Talbot county, in this state, are turning their fruitful materials to profitable account.—They go frequently as many as six feet deep into beds containing a thousand or two thousand loads; where previously it was not known that there was one—a correspondent who discovered by accident the valuable use that might be made of it, says, a few years ago I hauled manure half a mile and deposited it within twenty yards of a bank or bed of more than 1000 loads, since found and taken out, of superior quality. The knowledge of it is spreading fast, and from the immense quantity of it to be every where found on our waters, it is of much importance.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	to	RETAIL. from	to
BEEF, Baltimore Prime,	bbl.	8 50			
BACON, and Hams, . .	lb.	7	10	9	12
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java, ...	—	16	18	22	25
Havana, ...	—	15	17½	18	20
COTTON, Louisiana, &c.	—	15	17		
Georgia Upland, . . .	—	13	15½		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	18
Dipt, ...	—	10	11	11	12½
CHEESE, ...	—	9	10	12	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90		1 00	
FLOUR, Superfine, city,	bbl.	4 50	4 62	5 50	6 25
Fine, ...	—	4	4 25		
Susquehanna, superfi.	—	5 00		none	
FLAX.	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	70	73		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	75	92		
do. Red, ...	—	80	92		
do. White Flint, . .	—	2 00			
Rye, ...	—	60	62		
Barley, ...	—	90	1 00		
Clover Seed, Red . .	bush	4		5	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	bush	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	40	42	45	
Beans White, ...	—	1 50	1 75	1 50	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	30	37	50
HOGS' LARD, ...	—	9	9½	12	
LEATHER, Soal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45		62	75
Havana, 1st qual. . .	—	32	33	37½	
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb.	7		9	
NAVAL STORES, Tar,	bbl.	1 75	2 00		
Pitch, ...	—	2 25			
Turpentine, Soft, . .	—	2 00	2 12		
OIL, Whale, common, .	gal.	30		40	50
Spermaceti winter .	—	70		88	1 00
PORK Baltimore Mess,	bbl	12 50			
do Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	5 25			
RICE fresh, ...	lb.	3	3½	5	6
SOAP Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5½	7	8	12
WHISKEY, 1st proof, .	gal.	26½	27	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	none
APPLE BRANDY, 1st pr	—	35	37	50	none
SUGARS, Havana White,	c.lb	13 50		15	16
do. Brown, . .	—	9 50	10 25		
Louisiana, ...	—	8 50	10 50	10	11
Loaf, ...	lb.	19	22	20	23
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	80		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	17		25	
SALT St. Ubes, ...	bush	46	48		
Liverpool Blown . .	—	53	55	75	
SHOT, Balt. all sizes, .	cwt	9 50		12 50	
WINES, Madeira, L. P.	gal	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 30	2 00	
Lisbon, ...	—	1 15	1 25	1 50	1 75
Claret, ...	doz.	4	8	5 00	9 00
Port, first quality, . .	gal	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	washed free of tags.	
do. crossed, . .	—	[illegible]	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

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AGRICULTURE.

SHEEP.

Selections for the Pennsylvania Agricultural Society.

Extracts from Dr. Parry's Essay on the Nature, Produce, Origin, and Extension of the Merino breed of Sheep.

(Concluded from page 395.)

New Leicester Sheep do not thrive upon moderate keep.

"Again, the Leicester sheep loves to feed and fill himself within a small space of ground; and, therefore, requires rich and luxuriant herbage. On the contrary, on moderate or poor keep, obtained at the expense of exercise, this breed acquires less flesh in a given time than the Ryeland or Southdown. It is therefore, comparatively, unfit for nearly half the pasture land in this island.

A Leicester ram is sluggish, and naturally inefficient; the ewe is often barren, and generally a bad nurse; and the breadth of shoulder in the lamb, endangers its own life, and that of its dam, in yeaning. They are therefore, comparatively, unfit for propagation."

New Leicester Sheep fit to produce that which cannot be eaten.

"As to the merit of their form in a picturesque view, I do not presume to decide; but I should scarcely expect to see it chosen for representation in any picture, which was not expressly intended for agricultural illustration, except by that artist, who, having always furnished the shoulders of his full grown clowns with the heads of children, fancied the composition beautiful.

For what then is a perfect Leicester sheep fit? On rich land, he is calculated, at an early age, to produce, for eating, that which cannot be eaten, but which is good for the manufacture of soap and candles.

Is there then, it may be asked, no fitness, and therefore no beauty in that form, which is now so generally recognized as perfect? I think there is. I have allowed that the abstract principle is well founded; but I deny that it is either universally applicable, or that it is true in the extent to which it is carried in the New Leicester race of sheep. Every thing is fit, and therefore beautiful, only when in its proper degree as well as place.

In these points, which when justly regulated, are doubtless excellent, it cannot be denied that the pure Spanish breed is, in its own country, grossly deficient But at this we cannot wonder, when we attend to its history. We have seen that, in Spain, it is merely a wool bearing animal, in which figure is no more important than in a silk-worm, or a cotton-plant; that a great proportion of the rams are killed as soon as yeaned; that only a few wethers are made; that *the animal is rarely eaten*, except by the shepherds and other labourers, and then never fattened; and that *Madrid, near and through the gates of which myriads of this breed annually pass, actually depends on Barbary for its supply of mutton.*

If, indeed the principle be admitted, that good forms cannot be obtained without an uniform degree of nutrition, it is impossible that they can ever exist under the present habits of the Merino race in Spain. *Sheep never thrive well on any food when kept together in great numbers.* It is also necessary to the economy of these and various other animals, that after having finished a meal, they should lie down and rest for the purpose of chewing the cud. As the food is not regularly taken, the stomach in different animals composing large flocks must become full, during every different minute of the day; notwithstanding which, they must at stated hours take their daily journey of from five to fifteen English miles. By this forcible deviation from the laws of nature, their digestion is impeded, and their nutrition, and consequently growth, is proportionably defective.

Now I would ask any candid man, whether, under such circumstances as these, continued during several centuries, the Southdown, or any other of the best native breeds of sheep in this island, could possibly have been in a superior state as to carcass? I would also appeal to the same person, whether experience does not justify us in concluding, that by the same *care in breeding and nourishing, which has been long practised on the Southdown sheep, the Merino race itself may not, in a few years, be much meliorated, and, at length, in every circumstance of general usefulness, fully equal those which are quoted in order to disgrace it?*

In this respect very great improvement has already been made by Lord Somerville, whose ram No. 20 must be acknowledged, by the most prejudiced, to have a beautiful form; and if the throatiness, or dewlap, which is often found in these sheep, and which is merely a duplicature of the skin, be a fault, Lord Porchester informs me that he has succeeded in entirely getting rid of it."

The finest Wool placed on the best carcass.

"In forming my own flock, my view has certainly been to place *the finest wool on the best carcass.* But, for reasons which I shall hereafter assign, I have thought the two objects incompatible at the same time during the beginning of any set of experiments in crossing these two breeds, and therefore have hitherto confined myself only to the former object, which I have as yet, by no means fully accomplished. I have bred indiscriminately from all my ewes, and universally preferred those rams which had the finest fleeces, notwithstanding which, my sheep are, in general, shorter in the legs and necks, have smaller bones, a rounder barrel, a wider loin, and, consequently, a better hind quarter, than any pure Merinoes which I have happened to see, except that particular ram of Lord Somerville, which I have already mentioned.

This change I attribute to the female, or Ryeland blood, which in forming the progeny, acts most on the carcass; while that of the male, or Merino, chiefly affects the skin and fleece. This opinion is confirmed by the following facts:

Of the pure Negrette breed, a very large proportion of the rams is horned, while a few have short snags, and scarcely any are knots, or hornless. On the contrary, of the Merino Ryelands of the fourth cross, a considerable number have no horns or only snags; and I am disposed to believe, that the proportion of these increases as we breed in and in from the same cross, though from horned rams. Farther; in breeding from the pure Merino, the ram lambs in carcass take after the father, and the ewe lambs from the Ryeland; and the same thing happens with regard to the fleece; so that the male offspring in many instances, obtain preeminence in fine wool one generation before any of the female.

These facts show the respective influences of the male and female in generation; and as, from what I have stated above, it appears that the fleece is constantly improving from breeding in and in with *the fourth* cross, I may hope that at this period, I may now be able to attempt a melioration of the carcass by that mode, so as in a very short time to exhibit its effects through a large proportion of my flock.

As far as I have been able to observe of this breed, the great progress which they make is from 2 to 4-tooth. The proper time to fatten them will therefore be from 4 to 6-tooth. But both periods may probably be accelerated by early and uniform luxuriance of keep. Perhaps also the same end may be promoted by breeding in and in This has been suggested to me by Mr. Davis, who thinks the early fattening of the New Leicester breed to be chiefly owing to this cause. He says, that this constant incestuous intercourse produces, in both sexes, a deficiency of the powers of generation, and of that of nursing in the female; reducing them to a state approaching to that of eunuchs, who, in all animals, are observed to have a peculiar tendency to obesity. This conclusion is derived not only from what takes place in the Leicester sheep, but from the case of the *North Devon cows*, which have constantly intermingled with those of a small district around them, and have long been famed for a form, and disposition to fatten, which makes them much sought for by the butcher and grazier. *These cows, however, are notoriously bad milkers, and go barren to the western fairs in greater numbers than those of any other breed.* If this opinion be well founded, it shews that the divine law against incest has a physical, as well as a moral end."

SCIENTIFIC MEMORANDA—APPLICABLE TO RURAL ECONOMY.

(Continued from p. 396.)

Grapes.

Every bunch of grapes commences its formation as a tendril, and it is always in the power of every cultivator to occasion it to remain a tendril. The blossoms are all additions, the formation of which is all dependant upon other agents, viz. upon the leaves, which are required to elaborate the food, and upon a good exposure to light and heat. See *Knight in Lond. Hort. Trans.* 1819.

Aphis Lanigera, or American blight.

This insect infests and injures the apple tree. They are the smallest of the aphides. When young, they are of an amber colour, which approaches that of lead as they become full grown. They are found upon the thinnest bark, and in cracks of the outer bark, enveloped in a mealy web, resembling, when examined through a microscope, an accumulation of the finest cotton threads. They multiply rapidly; subsist on the juices of the tree, and cause small bunches upon the branches and roots. Their web contains an infinite number of small transparent globules, of a viscid saccharine fluid, the voided excrements of these singular insects. They prefer young trees. The effects of their ravages are soon visible in the cankered appearance of the bark, the sickly aspect and scarcity of the leaves, and the almost total want of blossom. *In several other species of aphides or plant lice, the excrementitious deposition is the cause of the phenomenon known by the name of honey-dew.* To destroy this mischievous insect, Sir Oswald Moseley (see *Rep. Arts*, 1819, p. 175,) found train oil the only effectual application. It not only caused instant death, but the insect did not re-appear on the part oiled during the two following summers. This aphis is often beaten to the ground by heavy rains, when it crawls to the root and makes a lodgement there.

This insect has caused much alarm to the horticulturists of Great Britain. It has appeared in my nursery two or three of the last seasons, and given much trouble. I have made it a business to seek for and destroy them, until their number is greatly lessened. With a woollen cloth saturated with train oil, I am in hopes of now being able to overcome them In the nursery the cloth may be used with the hand, and affixed to a stick or pole for larger trees.

There is a maggot (says Hayward, in *the Science of Horticulture, &c.*) which preys on the young branches of the apple tree in a singular manner.' It penetrates near the point of the young growing shoots, and eats its way down the centre of the pith. The young shoot of course withers and dies, and, to a superficial observer, without any susceptible injury. Whenever, therefore, this is seen, the top should be cut off, the hole of the maggot will then be discovered, down which it should be traced to its end and destroyed. Query—Is it not this maggot that destroys many of our pears, the first indications of decay in which appears in the branches?

The eggs of an aphis are deposited in autumn, (says *Hayward*, in the work before quoted,) on the embryo bud of the peach, which is hatched with the first start of vegetation in spring; and they multiply so fast, that in a few days there are several generations of them, which become destructive to the young fruit and tree. The only successful application was found to be snuff, repeatedly applied with a barber's puff. It has been ascertained by M. Bonnet and other naturalists, that males of the aphides are produced only every tenth generation, and then but few in number—*one copulation serving for the ten generations!* See *Rep. Arts*, 1819, p. 357.

The aphis alluded to by Hayward may be found in the corolla and calix of the peach while in bloom. I have seen the latter filled with them. I think the smoke of tobacco or sulphur, in a still morning, would be as beneficial as snuff, and could be more generally applied.

Salting Cattle.

The duty on rock salt, consumed in Great Britain, is 5*l* ($22 20) the ton; the cost of the salt, exclusive of the duty, 10s. ($2 22) the ton. From the examinations before parliament, and the discussions which have taken place in the periodical journals, relative to the operation of this enormous tax upon agriculture, and the poor, many interesting facts have been developed. It appears from these documents, that not only farm cattle, but even the poor of many districts, have been virtually restricted the use of salt, by the heavy impositions of government, and that where this privation has been felt, diseases have been multiplied to man and beast to an alarming extent. J. C. Curwen, member of parliament, well known as a scientific and successful agriculturist, states, as among the advantages of giving salt to his cattle daily, that it removed the unpleasant flavour from milk of cows fed with turnips, that it greatly lessened inflammatory diseases, promoted digestion, increased the quantity of milk, and disposed the animal to fatten. That it improved the general health and spirits of horses, rendered the gloss of their coats remarkably fine; and, given at the rate of eight to twelve ounces per day, restored to usefulness and comparative health several which had been rendered useless by a disorder called *the grease*. That given to sheep in the quantity of two ounces per day, it preserves their health, renders them sound, and sensibly improves their condition.

Lord Somerville, equally noted for his spirited and judicious husbandry, considers salt all important to sheep. Without it, even on dry soils, his flock became sickly, and many died. Salted twice a week, they became healthy. Salt preserved hay, and restored it when damaged. It is a preventive of the rot. In the humid climate of Great Britain, his lordship [illegible] a ton of salt to every thousand sheep annually. It is particularly serviceable with green food, clover and turnips, and *prevents or cures the hoove*, occasioned by excess of fermentation in the stomach. In a wet season he did not lose a sheep, although fed with turnips, and he considers salt a specific against disease. He generally gives it with hay, about 25 lbs. being salted on every ton. See *Rep. of Arts*, [illegible]

These facts should [illegible] encouragement to the farmer. I have for two years had troughs fixed under my cattle sheds, to which the stock have free access, and in which salt is constantly kept. During this time I have not had an animal diseased, except by accidents. I do not think more salt is consumed than would be required to feed twice a week in the old method; and I believe the beasts are as much benefited by having it daily, or when their appetite craves it, as man is by mixing it with his ordinary food.

PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE.

Stated Meeting, Feb. 21st—Adjourned Meeting, February 23d, 1826—Dr. Mease, Vice President, in the chair.

The following communications were read:

I. A Report from the Committee of the Society, appointed to receive applications and award premiums, from the fund established by John Scott.

The following premiums have been awarded—

1. To Samuel Goodwin, for an ingenious front door lock, $20.

2. To Dr. James S. Ewing, for a screw-cock hydrant, a medal and $20.

3. To Coleman Sellers, for a simple and effectual cupping instrument, a medal and $20.

4. To Thomas Barnitt, for a press to force out the extra quantity of tar used in the manufacture of cordage, a medal and $20.

5. To Isaac Conard, of Lampeter township, Lancaster county, Pa., for a simple and effectual barrow to plant Indian corn, a medal and $20.

6. To George Harper, for two drills, one for potatoes and one for seeds, $10.

7. To William Shotwell, New York, for an easy weeder for garden walks, $5.

8. To Robert Welford and James H. Deas, for an improved plane, with frictionless metallic rollers, for planing floors, a medal and $20.

9. To Daniel Neal, for a vertical printing press, a medal and $20

10. To James Gardette, dentist, for three great improvements in his profession, now in general use in Europe and the United States; and for a simple lever instrument for the more easy and expeditious extraction of teeth and stumps of teeth, a medal and $20.

11. To Jonathan Nicholls, of Providence, Rhode Island, for a portable carriage spring seat, a medal and $20.

12. To John Meer, for a razor strap, a medal and $20.

13. To Mrs. Frances Jones, for an improvement in making patent lint, $20

14. To Benjamin Freymouth, for a very ingenious chamber alarm bell, which can be attached to a watch, a medal and $5.

15. To John C. Jenckes, of Providence, Rhode Island, for an apparatus to enable persons with fractured limbs, to be moved in their positions in bed, and to be raised up without injury to the limb, a medal and $20.

All the foregoing inventions are in use.

II. A letter to the chairman from Mr. W. J. Miller, Esq., of Philadelphia county, on the culture of rape, dated February 20, 1826. Mr. Miller found that a crop of wheat on ground which had previously borne a crop of rape, was one of the best he ever had, and that the burthen of grasses, viz: wheat, clover, timothy and orchard, sown upon the wheat, and cut last season, was greater than any he had hitherto. On the 23d July, 1824, he sowed twenty acres of corn ground at the last harrowing, with rape seed, on the 25th September, when the corn was [illegible], the rape covered the whole surface, [illegible] the plants were two feet high. A [illegible] furnished pasture for 200 ewes and lambs, above two weeks. 14 acres were left until the [illegible] December, and afforded the ewes fine succulent pasture, till the time they commenced lambing, when they were put on hay, and at noon a good feed was given them, of the yellow Aberdeen turnip and mangel wurtzel, with which he has succeeded better, than with the ruta baga.

Besides the value of rape for sheep, Mr. Miller thinks that no green crop can be so profitably employed either for soiling or pasturing milk cows. He says, Mr. Curwen, of Cumberland, England, speaks in the highest terms of it in his reports; increasing the quantity of milk, without imparting any disagreeable flavour to it. Ploughed in green, Mr. M. supposes rape would be superior, as a manure, to any plant used in that way. Mr. William Phillips, the neighbour of Mr. Miller, has six acres of rape, sown last September, for seed. It is now quite green, notwithstanding the late severe frosts. The value of the rape seed oil for greasing wool, and of the cake for fattening cattle, was mentioned in the report of the Society's meeting, in January. These important facts will, doubtless, be appreciated by our farmers.

III. A letter from Dr. Hatfield Smith, of N. J., with a sample of cotton which he procured at Arica, in Peru. The trees from which he took the cotton were of great size. The dimensions of one were rather more than seven inches in diameter, and upwards of fourteen feet in height. It was covered with flowers and pods, in various states of maturity. The trees grew within a quarter of a mile of the sea shore; those which grew further up the valley were not so healthy. The seeds are black, and part from the wool easily. The staple of the cotton, is about the length of the green seed or upland cotton of the United States, but coarser.

The salutary effects of the proximity of the sea on the Arica cotton plant, will not surprise the planters of the Southern United States, who know the connexion between the fine quality of the silky black seed or Sea Island cotton, and a salt atmosphere. Their experience coincides with that of the planters of Demerara, (Bolingbroke's Voyage, and with the reports from Africa, (3d Report of African Institution,) and yet Koster says, that in the Brazils "the opinion is very general that the cotton plant will not thrive in the neighbourhood of the coast," and asks, "might not the Sea Island seed be sent for, and a trial of it be made?" He is ignorant of the fact, that the Sea Island cotton seed was originally received from Pernambuco, as stated in a former report of a meeting of this society.

The Publishing Committee announced the publication of the fifth volume of the Society's Memoirs, by Mr. Small. [*National Gazette.*

KITCHEN GARDENING.

As every farmer is interested in the best method of cultivating a common kitchen garden, I have collected as much information on that subject as my means could furnish. I found that many farmers are in the habit of purchasing seeds from the people denominated Shakers; and I imagined that an account of the Shakers' method of cultivating the most useful plants of the kitchen garden, would be very acceptable. In the annexed directions I have embraced a course of operations which I received from Richard Treat, the oldest gardener at the Shaker village in New Lebanon, Columbia county, New York. The hospitality and friendly attentions of this people, and their readiness to communicate whatever they believed might be useful to the industrious cultivator of the earth, could not excite gratitude and admiration. Leaving out of view what we are disposed to call errors in their religious creed, we may confidently say, that every thing visible among them exhibits the fruits of genuine Christian benevolence, amiable manners, and *highly cultivated understandings.*

LETTUCE.

It should be sowed as early as it can be raked into the ground, for it cannot be injured by early frosts. Dr. Hammond sows a bed for early lettuce late in the preceding fall. It ought to be sowed in rows sixteen inches apart, between vacant rows intended for some other plant; for as the lettuce will soon be pulled out, other rows of later vegetables may occupy the whole bed.

RADISHES,

Should be sowed in drills, eight inches apart, the last week in March. The beds should be made of horse manure fresh from the stables, well mulched with good garden mould. Often loosen the soil about them while growing, and keep the weeds out.

ONIONS.

They should be sowed about the 28th of April, in drills sixteen inches apart, made very shallow, not exceeding half an inch in depth, and raked in lightly lengthwise of the drills. The beds having been well worked with thoroughly rotted manure, at least five inches deep, they will be up very uniformly in about fourteen days.

Hoe them as soon as they are just up sufficiently to be hoed carefully without injury. Let them be hoed six or seven times during the season. The tops will fall about the 10th of August, but they will continue to grow until about the first week in September. They must not be pulled until the tops become dry; being biennial, onions never produce seed until the second year.

Onions should always be sowed on the same beds; for experience has demonstrated that the crops become better after being raised on the same beds for many years in succession.

PARSNIPS.

They should be sowed about the 28th April; but Dr. U. Gregory prefers the last week in March, and selects a dry sandy or loamy bed, which will admit of the earliest culture. He says parnips become poisonous in damp ground. They should be sowed in drills, 20 inches apart, and three-fourths of an inch deep, and raked in lengthwise of the drills. The beds should be previously well worked and manured, and afterwards frequently hoed, which is all the care required.

BEETS AND CARROTS.

They should be sowed about the 28th of April, in drills three-fourths of an inch deep, and twenty inches apart; if carrots are in drills, but sixteen inches apart and half an inch deep, it is about as well. The ground prepared and the seed raked in as for onions.

GARDEN PEAS.

They should be planted about the 28th of April, in drills by pairs, six inches apart, so that one row of bushes may serve for the pair of drills. There should then be four feet space, from centre to centre, between the pairs of drills. The drills should be half an inch deep, and the seed raked in lengthwise of the drills.

They should be hoed once, then bushed, and hoed once after being bushed. From this time, merely pull out the weeds.

GARDEN BEANS,

Should be planted about the middle of May, half an inch deep in rows. The rows for bush beans should be three feet apart, with the hills in a row two and a half feet from each other. The rows for pole beans should be four feet apart, and the hills in a row three feet from each other.

They should be hoed three times before the flowering time; but must never be hoed when wet with dew or rain.

MELONS, CUCUMBERS, AND SQUASHES.

They should be planted about the middle of May; cucumbers for pickling may be planted the middle of June. The hills may be three or four feet apart. The ground should be as well prepared as for onions. And they must be hoed three times before the time for the vines to run. Afterwards pull out the weeds.

In this part of the country a situation should be selected for cucumbers, which will be shaded from eleven o'clock in the forenoon until three o'clock in the afternoon, and where they are exposed to the sun the rest of the day.

CABBAGES.

They should be transplanted into the beds where they are to grow about the 20th of May, they having been sowed in a small bed for plants about a month previous. The ground ought to be well mellowed and manured, before they are transplanted.

They should be hoed in the morning, when the dew is on, once each week, until they begin to head.

They must not be pulled up until there is danger of their freezing too fast in the ground to be got up. If there happens an early snow, it will not injure them. When they are removed from the garden, they should be set out again, in a trench dug in the bottom of a cellar. If the cellar is pretty cool, it will be the better. [*Burlington Gazette.*

NETT WEIGHT OF CATTLE, SHEEP AND SWINE.

Near Haddenfield, N. J., Feb. 10, 1826.

Mr. J. S. Skinner,

The precision that distinguishes the editorial articles of the American Farmer, and the accuracy generally attaching to them, warrants the belief, that no one more than yourself desires to circulate correct knowledge, or to aid the detection of errors, whether of opinion or calculation. Under these impressions, I beg your attention to the "table of the Graziers' Ready Reckoner," in the 4th vol 24th number of the American Farmer. It purports to show by inspection, simply by the measurement of their girth and partial length, the nett weight of black cattle, sheep and swine If this result could be obtained with tolerable accuracy, the table would be very serviceable to most farmers; if, on the contrary, it has been arbitrarily constructed, and contains important errors, it much concerns dealers in those animals to refuse it their confidence.

From the fact of the length and girth only, being the index to the weights, I assume that the bodies of those animals are to be considered as cylinders; consequently, the ratio of their size and weight should be analogous to the contents of this figure: now as cylinders of the same altitude are to each other as the area of their bases, so each animal of like length but increasing girth, must increase geometrically in weight. This agreement between girth and weight, however clear to my mind, does not suit any part of Mr Renton's table. Take seven cattle, each of six feet length, increasing one inch in girth; by the table we see

No. 1,	of 7 feet	6 inches	girth,	weighs	1133 lbs.
2,	7	7	"	"	1159
3,	7	8	"	"	1180
4,	7	9	"	"	1210
5,	7	10	"	"	1235
6,	7	11	"	"	1263
7,	8	0	"	"	1289

Hence I deduce the following scale of differences of weight—

No. 2	is heavier than	No. 1,	26 lbs.
3	"	2,	21
4	"	3,	30
5	"	4,	25
6	"	5,	28
7	"	6,	26

Instead of an ascending series of differences, the weight of between No. 1 and 2, is the same as between No. 6 and 7. What is yet more plainly false, if there be any truth in mensuration, the greatest difference is between No. 3 and 4 by no less than 30 lbs.!

Admitting the principle that girth and length are sure indications of weight, yet this table ought to be abandoned because of the great errors now obviously presented.

But I am opposed to the principle itself. Until I shall become more skilled in comparative anatomy, I will not believe that the conformation corresponds, of oxen and rams, calves and hogs, heifers and lambs, bulls and wethers, pigs and cows, without regard to sex, condition or other circumstances.

To one of these considerations I shall advert, as giving sufficient evidence against the "table." Two oxen of the same measurement, the one *large* frame and *lean*, the other of *small* frame and *fat;* according to Mr. Renton they would weigh alike. This is so obviously wrong, that it is hardly necessary to adduce proof. Whoever should think that a fat beast is specifically heavier than a lean one, let him view its inside, and he will be satisfied from its fulness alone, of his mistake. Suppose a well fatted ox should become lean, to verify the "table," his dimensions should decrease much in girth and much in length; fat, flesh, and even bone too, should decrease. But as the diminution of length would be trifling, and I strongly *suspect* his bones would not consume themselves nor yet contract, to accommodate the supporters of Mr. Renton's theory, it is evident that by the table, the loss of weight would be only partially exhibited.

That some breeds of cattle, bulk for bulk, are heavier than others, who can dispute, after being acquainted with the present improved stocks? The "short horn" possesses on other parts than those Mr. Renton's "string" surrounds, an extraordinary quantity of flesh and fat. You, Mr. Editor, and with you, the intelligent part of the community, will deem this fact conclusive against taking size in that manner for weight. Lest there remain some persons who may still be unconvinced, I will refer them to cattle whose weight has been ascertained, according to the good old manner, with the unerring aid of an equipoised scales. In the 2d vol. and 41st number of the American Farmer, will be found a list of cattle:

	No. 18—*an Ox.*	*No.* 8—*a Heifer.*
Girth,	8 feet 8½ inches	8 feet 9 inches.
Length,	9 "	8 " 9 "
Weighed, . . .	2026¾ lbs.	1548 lbs.

Now, sir, consistently with the "cylindrical system of computation," the ox contains 69.04 cubic feet, the heifer 67.7 cubic feet, the ox would be stated at about 2 per cent. heavier than the heifer, while his real and certain weight, as above shown, is 31 per cent.!

If, after this demonstration, a "Grazier" values not 399 lbs. of beef of his fattest and most plump ox, of the most approved breed, he has my consent to dispose of him by the "string and table of the ready reckoner." D. G. S——S.

THE ROT IN SHEEP CURED BY INOCULATION WITH VIRUS, FROM THE HEELS OF HORSES.

Extract of a letter from Mr. James Carver, late of Bengal, then resident in Philadelphia, to George W. P. Custis, Esq., dated August 29, 1808.

"During my residence in the East Indies, particularly after the year 1800, I accepted of an appointment to a factory in the district of Rungpoor, under the Napaul hills, near the chain of mountains which joins Tartary and China. After the severe inundation of that year, in which the peasantry of that country lost all their crops, their cattle became afflicted with severe diseases, and the *sheep, particularly, with the rot.* From the pleasure which I had always taken, in showing humanity to domestic animals, I was soon applied to by several of the Zummedaurs in the adjacent villages, to afford a remedy for this destructive disorder, and tried several without effect; at length recollecting that I had a hill pony, in my possession, very severely afflicted with the grease, I lost no time in obtaining the *virus from the heels*, and inoculated one of my cows, which took very well; and as soon as I was able I inoculated several of the sheep, and thereby effected a perfect cure. I am happy in observing that I was afterwards successful in all the attempts which I made excepting in a few instances, where I was applied to too late. The manuscript containing the items of all these experiments, I unfortunately lost while travelling to the westward in this country; you can, however, mention the circumstance to the faculty of your acquaintance, and if the experiment should be deemed worthy of a trial, I shall be happy if they may prove as successful as myself. This information I am of opinion, if widely communicated, may prove as great a blessing to *domestic animals*, as the inoculation with virus has proved to the human species. I inoculated the ewes in the udder, and males in the inside of the thigh."

To George W. P. Custis, Esq.

HORTICULTURE.

From the Westminster Review—London.

HISTORY OF ANCIENT AND MODERN WINES.

By Alexander Henderson, M. D.

(Continued from page 397.)

The last section relates to the wines of Gascony and Guienne. The Bordelais vineyards of Medoc, Graves, Palus, and Vignes Blanches, produce wines of prime quality: of the Medoc, the vineyard of Latour yields the strongest, and that of Lafitte the lightest choice wines. The Graves, so called from the gravelly soil, produces red as well as white wines, the Haut Brion is the best red. The Graves white wines have a dry, flinty taste, and an aroma somewhat resembling cloves; the best are those of St Bris, and Carbonnieux: Sauterne and Barsac are made on the left bank of the Garonne, between Castres and Langon, and are not, properly speaking, Graves wines. The soils of the Palus are alluvial, their wines, hard and rough, of a deep colour and strong body, are chiefly sent to the East Indies; they are also mixed with the weaker Medoc wines. The Bordelais wines at present are esteemed the most perfect that France produces; the completeness of the fermentation, and the subsequent judicious management, render them less disposed to acidity and other disorders than Burgundy wines: they are improved by sea carriage, and keep extremely well, of the red wines, Lafitte is the most choice and delicate, it "is characterized by its silky softness on the palate, and its perfume partaking of the nature of the violet and raspberry." The Latour is fuller, with more aroma, but less softness. The Chateau Margaux is lighter, with the delicate qualities of the Lafitte, but not quite so high a flavour. Those wines of the very first quality, are seldom met with even at Bordeaux.[*]

Dr. Lister, who visited Paris in 1698, particularizes the wines then most in esteem, or which he liked best. As great deference ought to be paid to the judgment and taste of the translator of Apicius, we extract the substance of what he says respecting the principal wines, especially as some seem not at present to be known, or at least are not mentioned by Dr. Henderson. The Vin de Bonne of Burgundy, a red wine, in some measure *dolce piquante*, was the very best he met with. Volne, a pale Champaigne, brisk, growing on the borders of Burgundy, partaking of the excellency of both provinces: Vin de Turrenne en Anjou, two years old, one of the best white wines he drank in Paris: Gauneten from Dauphiny, a pale, thin, white wine, very like the Verdi of Florence, of a very pleasant flavour; "but the most excellent wines for strength and flavour are those of St. Laurence, red and white: this is a most delicious muscadel." [Lister, p. 165.] Dr. Henderson mentions the red, but not the white St. Laurence [p. 175.] Dr. Lister gives the same account of the management of grapes for luscious wines that Dr. Henderson does: the red St. Laurence, he says, was the most delicious wine he ever tasted in his life. He likewise specifies excellent wines from Cahors, and Cabreten (near Bayonne,) white and red, strong and delicious. He informs us, that the French had become fond of strong wines and liqueurs, which were brought in at the latter end of the dessert, a custom of which he remembers nothing when he was formerly in France. The Nantz brandy, formerly the morning drink of porters, was then valued very highly.[*]

The wines of Spain are treated of in the third chapter. Though this country possesses great natural advantages, its red wines, spoiled in the fermentation, are dull and heavy; its dry white, and certain species of sweet wines, are, however, nearly unrivalled. The best of the dry are those of Xeres in Andalusia: many of the principal vineyards belong to British and French settlers: hence the superior management, and the abandonment of the injudicious, as well as disgusting practices in the manufacture formerly prevalent. The driest sherry is the Amontillado; the quantity is very limited. The Paxarete, is a rich malmsey wine. All the Xeres wines are made from partially dried grapes. Tinto de Rota, known in England by the name of Tent, is the only red wine of Andalusia worthy notice. The hilly district near Malaga has three separate harvests of grapes; the last produces the Malaga and Mountain wines: at Alicant a vino tinto is made resembling the Rota wine.[†]

In the Fourth chapter, on the wines of Portugal, Dr. Henderson exposes, with merited severity, the absurd privileges, regulations, and practices of the Oporto wine company: this company formed for the purpose of preventing adulterations in wine, has produced infinitely more mischief than previously existed; the power they possess of limiting the territory within which the exportation wines alone can be made; and of putting a maximum price on the produce of this district; and the practice pursued of mixing the best wines with those of inferior quality, and all with brandy, have rendered the finer products of the Douro vintage in a great measure unknown to us. The influence of this company has also ruined the Portugal white wines, which were formerly excellent: Bucellas, made a few miles above Lisbon, is the one best known in Britain.

The wines of Germany and Hungary, form the subject of the Fifth chapter. In the time of Tacitus there were no wines in Germany; the author of the Treatise De Genere Ebriosorum, boasts, that if Tacitus had visited his country at the beginning of the sixteenth century, he would have found vines flourishing, and wines made from them, between the Alps and the Elbe.[*] We agree with Dr. Henderson that it is doubtful whether the decree or permission of the emperor Probus, that his disbanded legions should plant vines, extended to Germany; the supposed cause, and the circumstances of that decree, we shall afterwards consider. It is certain, as we have already seen, that in the fourth century, the banks of the Moselle were planted with vines: the banks of the Rhine probably in the reign of Charlemagne At present the culture of the vine, in some places, extends to 52° north latitude; and "the best German wines are grown beyond the line which has been assigned for the successful cultivation of the vine in France." Rhenish wines are mentioned in very old writers, but the varieties are not specified. Their consumption must have been very great, as Guicciardini, in his account of the commerce of Antwerp in 1560, states that there were annually brought to this city 40,000 tuns. he praises them for their taste and salubrity, and for not affecting the head or stomach, even though twice as much were drunk as of any other wine.[†] At present in Britain, German wines are generally known under the general name of Rhenish; Hock is the only one specifically known, except to bon vivants. Between Mentz and Coblentz, where the banks are steep, and the soil and exposure propitious, the vine is extensively cultivated. The choicest vintages, however, are confined to a small portion of this district called the Rhingau, rather more than nine miles long, and four broad. The Hock or Hochheimer is a Maine wine.

The wines of the Rhine form a distinct order; the lighter resemble the *Vins de Graves* of France; but in general drier: their peculiar characteristic is a delicate flavour and aroma, called in the country *gare* but for which we have no word: they are also distinguished for their extreme durability: this Dr. Henderson supposes arises from the large proportion of *free* tartaric acid they contain, which can only be separated by the usual chemical re-agents [p. 221.] In favourable seasons, they are free from acidity, in unfavourable, the malic acid prevails: during the last century there were only five favourable vintages, viz., 1726, 1748, 1766, 1779, and 1783: of these the last is the most highly esteemed. In this century, 1800, 1802, and 1811, or the year of the comet.

Johannisberger is the best of the Rhine wines; to the monks we are indebted for this, as well as various other carnal blessings: the choicest is celebrated for its high flavour and perfume, and the almost total absence of acidity. The Steinberg ranks next: the strongest of all the Rhine wines, and, in favourable years, sweet and of a delicate flavour. The Rudesheimer is, however, preferred by some: a species of this approaches in excellence the first rate Johannisberg All these vineyards may be traced to the monks of the eleventh century. Hock, though of a high character, must yield, in the opinion of Dr. Henderson, to the choicer produce of the Rhingau. The better sorts of the Moselle wines are clear and dry, with a light pleasant flavour, and high aroma, not unlike that of the best Graves wines: they are ripe in five or six years, but they will keep twice that time.

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[*] Pontac is said to have derived its name from a President of the Parliament of Bordeaux. There was a French eating-house, with his head as a sign, near the Exchange in London, much frequented for its excellent dinners and wine at the beginning and middle of the last century.—Journey through England 1724, vol. i 169.—Connoisseur, No 19, 1751

[*] A Journey to Paris in the year 1698, by Dr. Martin Lister, pp. 163-8. This work is worth consulting, not only for the picture it gives of Parisian eating and drinking, but also for its account of objects of natural history, antiquities, gardens, celebrated personages, &c. &c. An edition of this work was published very lately with notes; but these add very little to the value of the original

[†] Teonge, a cavalier parson, of the reign of Charles II, who was naval chaplain in the Mediterranean, and appears from his diary, just published, to have possessed a genuine theological love of good eating and drinking, mentions Mountain Alicant, and Luke-Sherry what was the latter? Punch seems to have been a favourite liqueur in the Navy at that time, though scarcely known on shore: it had been but lately introduced from the East Indies. [Teonge's Diary, p. 3, 42, 43, 96.] Fryer [Travels in the East Indies, 1672,] says, this liquor has its name from Paunch, a Hindostannee word signifying five, the number of its ingredients. Ustarez, in his Theory and Practice of Commerce, mentions, that the high grounds near Malaga, which about the year 1700 produced very little wine, had, when he wrote, about fifty years afterwards, been converted into vineyards to the extent of thirty-three leagues square, in consequence of the demand for Malaga wines in the north of Europe.—Ustarez on Commerce translated by Kippax, vol. ii, [illegible]

[*] In this work there is a chapter devoted to a very minute, descriptive, and laudatory account of the various kinds of Beer, at that time made in Germany.

[†] Anderson's History of Commerce, ii. 190

The Tokay wines of Hungary, did not come into vogue till the middle of the seventeenth century; they possess a high character, but in the opinion of many, owing rather to their extreme rarity, and exorbitant price, than their intrinsic and real merit. In Dr. Townson's judgment, it is a fine wine, but no ways adequate to its price; some of the sweetish Spanish wines are equally good [229;] and Dr. Clarke compares it to Cyprus wine, or very luscious old raisin wine [*Travels,* viii. 405.] Dr. Henderson gives a very particular account of the vineyards, vintages, produce, &c., of the Tokay district.

The Sixth chapter relates to the wines of Italy and Sicily: the celebrity of the ancient wines of Italy, and its climate, exposures, and soil, would lead us to expect most excellent wines at present. But owing to the mode of training the vine, and other mismanagement of the vineyards and vintages, arising from the ignorance, obstinacy, and carelessness of the natives, which, according to Dr Henderson, are almost incredible, the Italian wines in general are very inferior. Those of Tuscany ought, however, to be excepted: here the process of wine-making is better understood, "and a greater number of good wines are produced, than in any other of the states of Italy" [p. 235.] The Aleatico, or red Muscadine, produced in its greatest perfection at Montepulciano and in two other places, "has a brilliant purple colour, and a luscious aromatic flavour, tempered with an agreeable sharpness and astringency" [p. 238] The sweet wines of the volcanic soil of Vesuvius are also excellent, especially the Lachryma Christi. The Sicilians are equally as ignorant, obstinate, and careless as the Italians, with respect to the management of their vineyards and wines; but such is the excellence of their soil and climate, that, in spite of this, their island produces some good wines, particularly white wines: contrary to what occurs in Italy, these are the most numerous, and also by far the best: those of Marsala and Mazzara have been long known in England: the red and white Muscadine wines of Syracuse are also occasionally met with. In no country is there room for so much improvement in wines, and at the same time, capability for it, as in Italy and Sicily.*

Dr. Henderson next treats of the wines of Greece, and of the islands of the Archipelago and Ionian sea. Turkish tyranny has produced its usual desolating effects on them. While Candia, and Cyprus belonged to Venice, they supplied the whole of Europe with the finest dessert wines; at present they afford very little: the choicest sweet wine is the Commendaria of Cyprus: the white Muscadine of the same island is also excellent. Of the former, Dr Clarke relates, that a greater proof of its strength cannot be given, than by relating the manner in which it is kept: the casks are neither filled nor closed: sheet lead is laid over the bung-hole, which is removed almost every day [*Travels,* iv. p. 19.] According to Olivier, however, as quoted by Dr. Henderson, the *Vino Santo* of Santorini ranks before the best growths of Cyprus. The Tenos, the red Muscadine of Tenedos, and the white Muscadine of Smyrna, vie with the richest Hungarian wines: "good Tenedos," according to Dr. Clarke, "perhaps, has no where its equal in Europe" [iv. 20.] The Morea, the original country of the Malvasia or Malmsey grape, from which the sweet wines of Madeira, &c. derive their name, produces now only very bad wines [247 and 287, note]. Dr. Henderson does not notice the wine of the Dardanelles; this, according to Dr. Clarke, will keep to a great age, twenty or thirty years, and if the vintage has been good, is equal to Tenedos—iii. 85.

The wines of Madeira and the Canaries occupy the Eighth chapter; the vines of the former are said to have been brought from Candia in 1421. We apprehend Dr. Henderson is incorrect when he states, that it was not till a comparatively recent period, that its wines became generally known and distinguished. In 1588, they had acquired a high character, and great quantities were exported, especially to England: we suppose the Malmsey Madeira.* it is certain, however, that when captain Cook visited this island in 1768, the management of the vineyards and vintages was very bad. The demand for Madeira wines in England has extended as well as improved their culture. The Malmsey is grown on rocky grounds exposed to the full influence of the sun's ray The Sercial, from a grape said to have been brought from the Rhine, requires to be kept very long, before it acquires the full body and the rich aromatic flavour peculiar to itself: it combines all the requisites of a perfect wine [p. 250.] The wines of Madeira, though naturally strong, receive an addition of brandy, the necessity or utility of which, however, Dr. Henderson considers doubtful. The mode of mellowing and improving them by a voyage to the East or West Indies is well known; for this is now substituted a less expensive process, viz. subjecting them to a high temperature, like the *fumaria* of the ancients. They are extremely durable, and indeed do not reach their utmost perfection till they have been kept eight or ten years in the wood, and nearly twice that time in bottle. Their nutty taste is inherent. The sweet wines of the Canaries are now little known; the dry wine of Teneriffe resembles Madeira, and often passes under that name. Dr. Henderson ought to have noticed the Fayal wine, which is much used in our navy, or exported to the West Indies and North America; it resembles Madeira.

The Cape wines, which form the subject of the Ninth chapter, are in general bad, owing to the low and strong soil on which they are made, carelessness of management, and other causes, all of which might be removed or avoided. In that case, the climate and soil of the Cape would produce good wines. Constantia alone, at present, is of superior quality; the supply is very limited. Even this wine, Dr. Henderson thinks inferior in flavour and aroma to the Muscadines of Languedoc and Roussillon, and the Malmsies of Paxarete and Malaga.

The wines of Persia, the subject of the Tenth chapter, like those of Tokay, are little known in Britain, and derive their reputation rather from their scarcity, than their intrinsic merits. It ought to be stated, however, that since Hafiz, Chardin, and Kæmpfer, extolled them, the culture of the vine has become comparatively neglected at Shiraz, and the manufacture carelessly conducted. According to Dr. Henderson, white Shiraz, even when of firm and generous quality, scarcely deserves to be ranked with the best growths of Madeira; the bright red wine resembles the second rate sweet wines of the Cape [p. 265.] Dr. Vincent compares the white to Madeira, but with a higher flavour [vol. i. p. 412, note.] The Persians indulge more openly and freely in wine than any other Mahometans. The ice with which they cool it, and their other liquors, is procured in a very simple manner. There are people who make it their business "to watch the frosty nights in the winter, when they go to the mountains near Ispahan, and throw water repeatedly, till the ice is sufficiently thick; they then cut it in pieces, carry it into caves cut in the rocks: what they cannot carry off before sunrise, is covered to defend it from the heat.*

(*To be concluded in next number.*)

NATURAL HISTORY.

UNSUCCESSFUL ATTEMPT TO DOMESTICATE THE MEXICAN HOG.

Dear Sir, *New York, Feb.* 21, 1826.

The Sus Pecari, or *swine with a navel on his back*, inhabiting New Spain and South America, was the subject of an invitation addressed to mariners and travellers by the New York Agricultural Society, about the year 1794, requesting that the creature might be introduced, for the improvement or enlargement of live stock

More than twenty years had passed away, without any other sight of this animal, than a solitary one, now and then, enabling the private exhibiters to increase their menageries, until the autumn of 1824, when a boar and a sow arrived from Caracas by the way of Laguayra, through the public spirit of Thomas H. Mitchell, Esq. I cheerfully paid the expense of transportation, and immediately sent them to Plandome, on Long island, that a fair experiment might be made on their value.

They passed the winter without much more housing than common hogs; and though the female accidentally received a considerable hurt, she produced a pig.

The observations made, as far as the time has permitted, are by no means favourable to their worth for domestic use.

My nephew, Mr. Warren Mitchell, who has had the regular superintendence, reports:—

1. That they are of small size, not weighing much more than a well-grown shoat six months old, of the ordinary breed, or *sus scrofa.*
2. That they do not accumulate fat like the individuals of that race.
3. That being exceedingly active, they climb, or leap fences, so as to be very mischievous.
4. That they possess an obstinate and perverse temper, resisting their keeper, and bearing severe beating before they will submit or obey.
5. That they have a propensity to attack human beings. They snap and bite grown persons as well as children, without provocation; and the female, though not so ferocious as the male, is nevertheless intolerably vicious. The consequence is, that it became necessary to confine them in a pen. They are very spiteful against negroes, and particularly prone to attack them.
6. That beside their smallness, leanness, and other disagreeable qualities, their surly and indomitable disposition renders them a great torment on a farm or plantation.
7. That he has lately found it expedient to part with them by selling them to a show-man.

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* Teonge, who seems from his Diary to have been more occupied with good living, and writing drinking and love songs, than with his duties as chaplain, has a poetical parallel between Syracuse and Ribolla, a wine of Zante, on the occasion of himself and his boon companions trying which was best: even the editor confesses "the humour is somewhat gross " In another place, he remarks, "we had a prince-like dinner, and every health that we drank, every man broke the glass he drank in, so that before night, we had destroyed a whole chest of pure Venice glass." Diary of Henry Teonge, Chaplain on board his Majesty's ships, Assistance, &c., from 1675 to 1679: published 1825, p. 96 We question, however, if at any time, or in any country, modern drunkenness reached the disgusting height, to which it had arrived at the Grecian banquets: we transcribe the words of Casaubon. "Aderant illis convivantibus, inter alia instrumenta perditi luxus, etiam matulæ: has sæpe, ubi incaluissent in capita invicem sibi illidebant—Casaub. in Athenæum, Lib. i. c. 14.

* Pigafetta, in Purchas. Book vii. c. 4. § 2. quoted by Anderson, vol. ii. 193.

* Bell's Travels from Petersburg to various parts of Asia, p. 86

If this is not a fair trial of their unfitness for agricultural purposes, I recommend that some other gentleman of enterprise should make other importations, and institute further experiments.

The gland on the back is not an umbelicus, but an excretory duct. Through it, is exuded or discharged an unctuous humour, which serves, like the fluid prepared in the rumps of birds, to besmear their coats, and to guard their bodies from wet and rain. It does not appear that there is any fetor or noxious property in it. This organ, in the present species, probably holds an analogy with the orifices on the inside of the fore legs of ordinary swine; and with the outlets for a similar use, at the base of the hoofs in the feet of sheep. It seems not to perform any defensive operation, like the *spodiar* of the skunk, or the *nubilum* of the cuttle-fish (or sepia.)

They do not root, or turn up the ground with their snouts; but dig or paw in an equally successful manner with their fore feet; and when enclosed in a stye and prevented from escaping over the fence or paling, they will get out by penetrating the earth unless there is a floor of board or stone.

When an ear of maize or Indian corn is thrown to them, they do not bite off the grains, or remove them by the teeth, but detach them by their feet, and afterwards take them into the mouth.

I am desirous to make known these facts, and to perpetuate them. I therefore send them to you, as a token of my respect, and for insertion in the American Farmer, if you deem them worthy of a place. SAMUEL L. MITCHELL.

J. S. Skinner, Esq.

LADIES' DEPARTMENT.

SOURKRAUT.

M. Parmentier has given a minute description of a process of making sourkraut on a large scale. The heads of white winter cabbages, after removing the outer leaves, are to be cut into fine shreds, by means of a knife, or with a plane, and spread out to dry upon a cloth in the shade. A cask is to be set on end, with the head taken out. If it formerly contained vinegar or wine, so much the better, as it will promote the fermentation, and give the cabbage a more vinous taste; if not, the inside may be rubbed over with sourkraut liquor. Caraway seeds are to be mixed with the shreds of cabbage, a good layer of salt is to be placed at the bottom of the cask, and then cabbage shreds evenly packed, to the depth of four or six inches. The layers are regularly stamped down with a wooden stamper, to half their original bulk. The same process is to be repeated with additional layers of salt, and shreds, till the whole be packed; they are then to be covered with a layer of salt, or till the barrel be filled within two inches of the top, over which the outside leaves of the cabbages are to be spread. About two pounds of salt are required for twenty middling sized cabbages.

The head of the barrel, which should have been previously well fastened together, is lastly to be put within the barrel above the leaves, and loaded with stones, to prevent the mixture from rising during the fermentation. The mass thus compressed subsides, and the cabbage gives out its juice, which rises to the surface, it is green, muddy, and fetid. It is to be drawn off by a spigot placed two or three inches from the bottom, and replaced by fresh brine.

MUSHROOM CATSUP.

The name of catsup is given to several kinds of liquid pickles, made of savoury vegetable substances—such as mushrooms, walnuts, &c. The following method of preparing mushroom catsup is copied from the Cook's Oracle.

Take full grown mushrooms; put a layer of them at the bottom of a deep earthen pan and sprinkle them with salt; then another layer of mushrooms; put some more salt on them, and so on, alternately, salt and mushrooms: let them remain two or three hours, by which time the salt will have penetrated the mushrooms, and rendered them easy to break; mash them well and let them remain for a couple of days, stirring them up, and mashing them well each day; then pour them into a stone jar, and to each quart add half an ounce of whole black pepper; stop the jar very close, set it in a stew-pan of boiling water, and keep it simmering for two hours at least. Take out the jar, and pour off the juice clear from the sediment through a hair sieve into a stewpan, (without squeezing the mushrooms;) let it boil up, skim it, and pour it into a dry jar; let it stand till next day, then pour it off as gently as possible, through a tammis, or flannel bag, so as not to disturb the sediment at the bottom of the jar. Bottle it in pints or half pints; for it is best to keep it in such quantities as are soon used: in each pint put a dozen berries of black pepper, the same of allspice, and a table-spoonful of brandy.

TOMATA CATSUP.

Mash a gallon of ripe tomatas; add to it one pound of salt, press out the juice, and to each quart add a quarter of a pound of anchovies, two ounces of eshallots, and an ounce of ground black pepper; simmer the mixture for a quarter of an hour; then strain it through a sieve, and put to it a quarter of an ounce of pounded mace, the same quantity of allspice, ginger and nutmeg, and half a dram of cochineal; let the whole simmer for twenty minutes and strain it through a bag; when cold, bottle it:

Or, put tomatas into an earthen pan, and bake them very slowly in an oven. Rub the pulp through a hair sieve, to separate the seeds and skins. To every pound, by weight, of the pulp, add a pint and a quarter of vinegar, with a dram of mace, ginger, cloves, allspice, and one ounce each of white pepper and minced eshallot; simmer them for half an hour, and strain off the liquid.

WALNUT CATSUP.

Take 28 lbs. of unripe walnuts when quite tender, reduce them to a pulp in a marble mortar; add to the mass two gallons of vinegar; let it stand three or four days; to each gallon of liquor put a quarter of a pound of minced eshallots, half an ounce of bruised cloves, the same of mace and black pepper, one tea spoonful of Cayenne pepper, and a quarter of a pound of salt; give it a boil up and strain it through a flannel.

CONSERVED FRUITS.

The preserving of the pulpy fruits employed in housekeeping for making fruit pies, tarts and puddings, so as to render them fit for that purpose, when they cannot be procured in their recent state, is an object of considerable importance in every well regulated family.

The expense of sugar is frequently urged as a reason for not conserving fruits in housekeeping, and to this may be added the uncertainty of success from the strong fermentable quality of many fruits if the sugar has not been very liberally added. They may indeed be conserved for a length of time without sugar, by baking them in an oven, and then closely stopping them up, but if the cork become dry, the atmospheric air exchanges place with what is impregnated by the fruit, which then soon becomes mouldy; some pulpy fruits may be conserved in good condition by the following method, for years, or even it is probable for a longer period, in hot climates.

Conservation of recent Fruits without sugar.

The following fruits may be conserved without sugar; the more juicy fruits of the berry kind, such as currants, mulberries, strawberries, raspberries, are not well calculated for this process:

—

Method of conserving Gooseberries, Orlean Plums, Green Gages, Damsons, Peaches, Nectarines, and Bullaces.

Let the fruit be clean picked, and not too ripe; put it into wide-mouthed, or what are called gooseberry bottles; let the bottles be filled as full as they can be packed, and stick the corks lightly into them, then place them upright in a saucepan of water, heated gradually to about 100 or 170° F.; that is, until the water feels very hot to the finger, but does not scald. Let this degree of heat be kept up for half an hour, then remove the bottles one by one, and fill them up to within half an inch of the cork with boiling water; when cold let the cork be fitted very close, and lay the bottles on their sides, that the cork may be kept moist by the water. To prevent fermentation and mould, the bottles must be turned once or twice a week for the first month or two, and once or twice a month afterwards. When applied to use, some of the liquor first poured off may serve to be put into the pie, or pudding, instead of water, and the remainder being boiled up with a little sugar, makes a rich and agreeable syrup.

The fruit ought not to be cracked by the heat; some trials were made by keeping the bottles in a heat of 190° for three quarters of an hour, but the fruit was reduced nearly to a pulp. It is also advisable that the fruit be not quite ripe, nor should it be bruised.

Some fruits may be preserved in a succulent state by being kept in water, without boiling. This is practised in regard to the cranberry: it also succeeds with the smaller kinds of apples. All pulpy fruits, such as damsons, plums, &c., if gathered when not quite ripe, and not wounded, may likewise be preserved, by putting them into dry bottles, so as to exclude the air, by sealing over the cork, and then burying them in a trench, with the cork downwards.

(*To be continued.*)

THE BACHELOR'S SOLILOQUY.

A PARODY.

Marry, or not to marry? That is the question—
Whether 'tis nobler in the mind to suffer
The sullen silence of these cobweb rooms,
Or seek in festive halls some cheerful dame,
And, by uniting, end it. To live alone—
No more! And by marrying, say we end
The heart ache, and those throes and make-shifts
Bachelors are heirs to. 'Tis a consummation
Devoutly to be wished.
To marry—to live in peace—
Perchance to war: aye, there's the rub;
For in the marriage state what ills may come,
When we have shuffled off our liberty,
Must give us pause. There's the respect
That makes us dread the bonds of wedlock;
For who could bear the noise of scolding wives,
The fits of spleen, th' extravagance of dress,
The thirst for plays, for concerts, and for balls;
The insolence of servants, and the spurns
That patient husbands from their consorts take,
When he himself might his quietus gain,
By living single.
Who would wish to bear
The jeering name of Bachelor,
But that the dread of something after marriage,
Ah, that vast expenditure of income,
The tongue can scarcely tell, puzzles the will,
And makes us rather choose the single life,
Than go to gaol for debts we know not of!
Economy thus makes Bachelors of us still,
And thus our melancholy resolution
Is still increased upon more various thought,

[*Answer to the above in our next.*]

MISCELLANEOUS.

CURE FOR THE ERYSIPELAS.

Dear Sir, *Walsingham, Somerset, Feb. 23d,* 1826.

I observed in the Farmer some time since, an inquiry for a cure for the erysipelas—and without saying any thing about the "*sacer ignis*" of the ancients, which Virgil mentions in the last line of his third Georgic, beg leave to communicate the following:

I accidentally met an acquaintance the other day whom I had not seen for a long time, and having inquired for his family, he told me that his "*alterum dimidium*" had been very unwell—that she was attacked with the St. Anthony's fire, insomuch that he thought she would have died instantly; but there was a venerable dame about the house, who, like Aunt Charity, had "the whole catalogue of *yerb* teas at her fingers' ends, from formidable wormwood down to gentle balm," who being roused, directed them to get some *dry nettle,* (our E. Shore Linnæus, at Cambridge, could give its botany,) and make a strong tea of it. They did so, and she was immediately relieved. The good man added, that "he thought all the world ought to know it;" and I am happy in giving it publicity, but there is one question which can only be answered by experiment. Will nettle or any other kind of tea produce the same effect on men, as on "womankind"? Vale.

Monkbarns.

SPORTING OLIO.

CHARLESTON RACES.

The races over the Washington Course commenced on Wednesday, Feb. 22, between Col. Spann's Bertram and Mr. Harrison's Lady Le Grange. Bertram took the two first heats. The first heat was run in handsome style, and was well contested: they were four mile heats—time not stated.

Second day—Three mile heats.

Mr. Harrison's Aratus, : : : : :	1	1
Col. Spann's William, : : : : :	2	2
Mr. Singleton's Saxe Weimar, : : :	3	dr.

First heat run in 5 minutes 54 seconds; second in 5 minutes 46 seconds.

Third day—Two mile heats.

Col. Spann's Sea Gull, : : :	1	2	3	1
Mr. Harrison's Frantic : : :	2	1	2	3
Mr. Singleton's Juliet, : : :	3	3	1	2

The first heat was run in 3 minutes 52 seconds—the second in 3 minutes and 50 seconds—the third in 3 minutes and 51½ seconds—and the fourth in 3 minutes and 57 seconds.

The racing of this day eclipsed entirely all that preceded it during the week, and will long be remembered on the Washington Course, for its vicissitudes, hard pushing, and fair competition. The most intense interest was raised at the very commencement of the heats, and was kept up and increased till the last foot of ground was bounded over at the close of the fourth contest for victory.

First Heat.—Sea Gull the favourite, but he was hard pushed by Frantic, and all the horses were put to their speed from the start. Sea Gull took the heat, Frantic coming in second, while Juliet barely saved her distance.

Second Heat.—The start was very foul, Frantic getting fully 60 yards in the lead. Sea Gull pushed him with great strength and speed, and came so hard upon him that Frantic took this heat by only about half a length—Juliet merely saving her distance.

After this heat, Frantic became the favorite, and the odds before in favour of Sea Gull were transferred to his conqueror on the second trial. Juliet was scarcely counted upon.

Third Heat.—This was a very close heat, and, to the surprise of all, Juliet took it, Frantic coming in close behind her.

In this stage of the racing, Juliet became the favorite, as it was supposed she had been saved in the first and second heats, and showed in the third that her speed and bottom were excellent—three to one in her favour; and as each horse had now won a heat, and the fourth was to decide the contest, the greatest excitement and anxiety were felt by the spectators for the final issue of the race.

Fourth Heat.—Frantic took the lead in gallant style, and maintained it throughout the first round, but in the second round he was beautifully passed by Juliet, Sea Gull barely holding his own. Bets were now 10-20 to one in favour of Juliet, but no takers: it was "Lombard street to a China Orange."

Sea Gull, however, was not to be conquered. At the last half mile of the track, he was put to his full stretch, and the struggle between him and Juliet became one of the handsomest trials of speed ever seen on any course. All was breathless anxiety in the spectators, and so close was the contest, that the crowd could not pretend to judge which was the winner; but on passing the stand, the victory was declared to be gained by Sea Gull, he coming in just half a head before his well-trained competitor.

Every heat was a hot one, the whip being put to all the horses from the jump.

Handicap Race.—The regular racing having closed on Friday, on Saturday the Handicap Race of three mile heats took place, and resulted as follows:

Col. Spann's Bertrand, : : :	2	2	1	1
Mr. Davenport's Aratus, : : :	1	3	3	2
Mr. Harrison's Creeping Kate, :	3	1	2	dr.

It was a splendid race, being throughout closely contested. At the commencement, Bertrand was the general favourite; but after the second heat, the issue was doubted, and the impression was strongly in favour of Creeping Kate.

The first heat was taken by Aratus, beating Bertrand a head—Creeping Kate holding in. The second heat was taken by Creeping Kate, beating Bertrand by three lengths—Aratus holding in. The third heat was taken by Bertrand, beating Creeping Kate, Aratus holding in. The last heat was completely a trial of speed, between Bertrand and Aratus (Creeping Kate being withdrawn.) The start was fair, and each moment produced a change of opinion, Bertrand and Aratus being alternately ahead of each other. Victory at last declared in favour of Bertrand—he beating Aratus a neck.

The first heat was run in	5 minutes 47½ seconds.
Second heat in	5 minutes 47½ seconds.
Third heat in	5 minutes 53½ seconds.
Fourth heat in	5 minutes 53½ seconds.

Thus the twelve miles were run in 23 minutes 22 seconds. This is called in the Charleston papers "the greatest race on record,' beating the ground covered by the celebrated Eclipse and Henry race on Long island, by 26 seconds—exceeding any thing ever before known on the Washington Course, and challenging the history of the turf in any country for superior fleetness and bottom."

DISTEMPER IN DOGS.

Mr. Editor—

You have been misinformed as to Mr. —— having an infallible remedy for distemper in dogs. I have sometimes given turbith mineral, say three doses of almost 3 grains each, every other day, which you have no doubt seen has been highly recommended, and have had dogs cured by it if taken in the early stage of the disease. From my experience I believe the only thing necessary to keep the distemper off, is to keep the animal's bowels open. To effect this, as soon as the distemper shews itself in the eye, give a table spoonful of sweet oil every day or two, as may be required. I believe it is acknowledged that costiveness alone occasions the distemper.

Respectfully, W. B. S.

Feb. 23, 1826.

[P. S.—Another gentleman ascribes the distemper to the dogs *cutting their teeth.*]

From another correspondent—an old and liberal sportsman, in the gentlemanly sense of the word, we have the following item:—"I have never lost a dog of any kind by the *distemper;* or by going mad; owing, as I have thought, to my keeping for the dogs' constant use, a trough of *clean* water, in which was placed three or four rolls of brimstone."

THE FARMER.

Baltimore, Friday, March 10, 1826.

Statistical information wanted.—To the collectors and city authorities of New York, Philadelphia, Baltimore, Alexandria, Fredericksburg, Richmond and Norfolk, and to the manufacturers of wool—The Editor of the American Farmer, at Baltimore, is desirous of getting, through your kind assistance, certain statistical information which may be highly useful to the public, and especially to the cultivators of *grain* in the United States.

It is well known to all, and sensibly felt by the grain growing states, that since the establishment of the peace of Europe, and the consequent cessation of the demand from that quarter for the surplus of bread stuffs which we cultivate for foreign markets, that the quantity of that product of agriculture, has so far exceeded the demand, that the consequent fall in prices has produced a wide spread pecuniary pressure and embarrassment in those agricultural districts which had been exclusively devoted to their cultivation. To procure relief from this, wherever the climate and soil would admit of change, some other objects of cultivation have been substituted, as wool, cotton, tobacco, &c. Hence it has become an object with those grain farmers, who from the peculiar fitness of their soil, or from their locality, have been induced to persevere in the cultivation of wheat, to be able to form a just conclusion as to the effect to be produced upon the price of the article, by the partial abandonment of its cultivation, which has already taken place, and from the annually increasing consumption from the increase of population in our cities and manufacturing districts, and in the eastern and southern parts of the union, where it cannot be advantageously grown. The question for farmers is, whether under existing circumstances, they have a reasonable prospect of such improvement in the reward of their labours, as will justify the continuance of the cultivation of wheat to its present extent, or whether *still more* of agricultural capital and labour ought not to be diverted to other objects. To enable us to form a just conclusion upon this important point, it would be highly advantageous to know what was the export of flour and wheat to foreign countries, from the ports of New York, Philadelphia, Baltimore, Alexandria, Fredericksburg, Richmond, and Norfolk, severally; and what the quantity of flour inspected in each of these places in the years 1790—'95—1800—'05—'10, '15, '20, '25.—This information as to exports, may be derived, it is supposed, from the custom-house books of those ports, and as to the quantity of flour inspected, from the inspectors' books in the different cities and towns, or their returns made to their respective corporations. The places named are the principal inspections of flour, and ports of exportation for the grain growing country, east of the Alleghany. The information which such a document would present, in connection with the census of the United States, at different periods of time, would afford the means of forming an opinion how far the home demand is growing upon the supply—what has been the effect of the cessation of foreign demand upon the product; and at what period we may calculate upon fair prices, from the home market alone—and with such views, farmers will be enabled better to judge how far it may be their interest to increase their flocks of sheep, or make any other change in the application of their land and labour. It would also be a desirable piece of information, how far the growing wool manufactories of our country keep pace in their demands, with the increasing quantity of wool which our country produces, and will continue more and more to produce.

☞BARLEY.—There is but little barley coming in now, and not much expected. The brewers have generally secured their stock for the season. One wants a few hundred bushels, and is offering 85 to 90 cents per bushel. One dollar per bushel was paid for several parcels purchased during the winter. All prudent brewers secure their stock by the first of January, when it can be done. It would be unsafe to depend on a supply by water after that time. There is very little grown in the neighbourhood, and of late years the price has been too low to bring it any distance by land; the last crop was quite short and very inferior. Many farmers cut none, and but few more than half a crop. Malting cannot be done to advantage before the 15th October or after the first of April. In warm weather the growth is rapid and weakens the grain. Annexed are the prices of beer and casks. It is supposed to be generally known that our brewers deliver beer in every part of the city, and *on board vessels free of charge.* Considerable quantities of beer are shipped, but not so much as formerly. The decline in the trade is owing, probably, more to the prevailing disposition to economize, than to any other cause. Every member of a family is permitted to partake of beer, the master of the family is ashamed to deny it, but, as he drinks all the *ardent liquors himself*, he buys little else. Ours is not a beer drinking country, its virtues are not known, and whiskey is too cheap. If beer was in common use, it is thought we should have as many fair complexions and rosy cheeks here, as in England; at least among the ladies, and those who are not exposed to the sun.

Table beer, - - - - - - - $4 per barrel.
Strong do. - - - - - - - 6 "
Single Ale, - - - - - - - 6 "
Double do. - - - - - - - 7 "

Charge for casks when taken out of the city—
Barrel, - - - - - - - - - $3
Half barrel, - - - - - - - 2
Quarter barrel, - - - - - 1½

When returned, which can be done at any time, the money will be returned to the purchaser.

☞The widow of the late Thomas Lewis, who supplied us all with so many fine vegetables, and whose cantaleups were so delicious, has advertised a large portion of his property for sale, on Monday next, the 13th day of March. Amongst other animals of much value as blooded mares, colts, &c. the fine young Cleveland bay stallion "TOM JEFFERSON," will then be exposed to sale for cash. He was foaled on the 2d September, 1822—was got by the imported horse Exile, for which the late Robert Patterson gave 100 guineas, when a yearling, in England. He is out of Fanny, formerly the property of Major Isaac McKim; her sire the noted [illegible] horse Eagle, her dam raised by Mr. Nimrod Owings, of Frederick county, well known as a most skilful connoisseur of horses, his judgment being proved by the superiority of his own stock, which is always in much demand. The dam of Fanny, bred by Mr. Owings, was got by the celebrated full bred horse Montezuma. The stallion, Tom Jefferson, is upwards of 16 hands—was let to a few mares last season at $20, and has proved himself a sure foal getter.

☞The Legislature of Maryland have passed an act establishing a Board of Publick Works, and certain acts for the prosecution of particular improvements of a publick nature—whereof we shall be able to give a better account in our next.

SALT.—A well to obtain salt water, is boring near Wheeling, Va. the present depth of which is more than *nine hundred feet.* The chisel is now acting upon a rock almost as hard as itself, and the progress is very slow.

SILK.—The sewing silk and raw silk produced in Windham county, Connecticut, is estimated to be worth 45,000 dollars per annum.

TOBACCO.—Inspections in the three State warehouses for the month of February—120 hhds.

SUGAR MAPLE TREES.

The subscriber, proprietor of the Nursery at Linnæan Hill, near Washington, has for sale a quantity of sugar maple trees of a handsome growth and a size suitable for transportation and planting, which he recommends as combining more useful qualities than any other tree planted for ornament—from it is made a sugar of an excellent quality, and vinegar equal if not superior to cider vinegar; the form of the tree is beautiful and regular, its boughs possessing strength and elasticity, seldom or never are broken by the winds; its dense and beautifully green foliage is entirely exempt from the depredations of foul insects.

He has also as usual a good assortment of fruit and ornamental trees; Flowering Shrubs and Green House plants, and Quicks of the American Hedging thorn and Pyricant tree, or Evergreen thorn.

JOSHUA PEIRCE.

SAXONY SHEEP.

The Saxon Merino Sheep, recently imported by Samuel Candler & Co. from Bremen, will be sold at Public Auction, at the New Bull's Head Inn, (kept by Thomas Swift) corner of Fourth-street and the Bowery, in the city of New-York, on Tuesday, the 21st day of March, at 11 o'clock, A. M. This flock consists of 40 Rams, 120 Ewes, and 6 Lambs; and was selected from the finest flocks in Germany, by a gentleman who went out expressly for that purpose. For fineness and softness of Wool and beauty of carcase, they have never been equalled by any Sheep imported into this country. So highly were they estimated in Bremen, that a large advance was offered for them before they were shipped. They are young, vigorous, and in fine health, with their fleeces on. Samples of the Wool can be seen at the office. To give a fair opportunity to all who may be desirous of obtaining this valuable breed, it is intended that no selection will be allowed, or sale be made, of any part until the above day, when they will be put in lots to suit purchasers. For particulars and terms, apply to

SAML. CANDLER & CO.
No. 2 Exchange Building, New-York.

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE.		RETAIL.	
		from	to	from	to
BEEF, Baltimore Prime,	bbl.	8	8 25		
BACON, and Hams, . .	lb.	7	10	9	12
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java, ...	—	18	17	22	25
Havana, ...	—	15	17	18	20
COTTON, Louisiana, &c.	—	15	17		
Georgia Upland, . . .	—	13	15½		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11	11	12½
CHEESE, ...	—	8	10	12	15
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90		1 00	
FLOUR, Superfine, city,	bbl.	4 50	4 62	5 50	6 25
Fine, ...	—	4	4 25		
Susquehanna, superfi.	—	4 50		5 00	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	72	75		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	75	92		
do. Red, ...	—	80	92		
do. White Flint, . .	—	2 00			
Rye, ...	—	60	62		
Barley, ...	—	90	95		
Clover Seed, Red . .	bush	3 75	4 00	5 00	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	bush	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	40	42	45	
Beans, White, ...	—	1 50		1 75	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	30	37	50
HOGS' LARD, ...	—	9	9½	12	
LEATHER, Soal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45		62	75
Havana, 1st qual. . .	—	25	26½	37½	
MEAL, Corn, kiln dried,	bbl.	3 00	3 25	3 75	
NAILS, 6a20d.	lb	7		9	
NAVAL STORES, Tar,	bbl.	1 75			
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2 00			
OIL, Whale, common, .	gal.	30		40	50
Spermaceti, winter .	—	70		88	1 00
PORK, Baltimore Mess,	bbl	12 50			
do. Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	5 25			
RICE, fresh, ...	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	18	20
Brown and yellow,	—	5½	7	8	12
WHISKEY, 1st proof, .	gal.	26	26½	38	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	none
APPLE BRANDY, 1st pr	—	37½		50	none
SUGARS, Havana White,	c.lb.	13 50		15	16
do. Brown, . .	—	9 50	10		
Louisiana, ...	—	7 60	9 60	10	11
Loaf, ...	lb.	19	22	20	23
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	75		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	17		25	
SALT, St. Ubes, ...	bush	46	48		
Liverpool Blown . .	—	53	55	75	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 30	2 00	
Lisbon, ...	—	1 15	1 25	1 50	1 75
Claret, ...	doz.	4	8	6 00	9 00
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled, .	—	33	35		

Printed every Friday, at $5 per annum, for JOHN S. SKINNER, Editor, by JOHN D. TOY, corner of St. Paul and Market streets, where every description of Book and Job Printing is handsomely executed.

AGRICULTURE.

SHEEP—COLUMELLA.

Curwen's Reply.

"Columella asserts "again Mr. Powel says, the sheep which produce the finest fleeces, are not *necessarily* the best to form a breeding flock;" "now I take the converse of this proposition to be true." (American Farmer, Dec. 30, 1825.

Does Columella mean, the converse of the opinion conveyed in the paragraph, whereof he gives but a fragment? Mr. Powel had said in the same page, "the quantity and quality of the wool are matters of serious importance, when the value of sheep is to be determined. I do not mean, by quality, the fineness of fibre alone; nor do I mean to confine the remark to sheep, whose wool is of the finer sort. The filaments of combing wool should part readily; those of fine wool should be *soft* and elastic, as if it had been frizzled. The mere fineness of the fibre or length of the staple, is not the only test of excellence; a diseased, or half starved sheep produces fine wool, but not an elastic nor useful material" (Therefore) "the sheep which produce the finest fleeces, are not *necessarily* the best to form a *breeding flock.* If their constitutions be not good, if *their forms* be bad, the secretion of yolk, which is essential for the support of the fleece, must be small; the offspring consequently, will be a degenerate race. Thus, in selecting Merinoes, regard should be given to their forms, even in those parts of the country, where the demand for the carcass is so small, as to make mutton of little value."

It is evident he did not desire, that attention should be given for the enlargement of size; he had previously observed—"large size does not more determine, the extent of usefulness in the quadruped, than in the man." Mr. Powel has never recommended the exclusion of Merino sheep, nor has he opposed the multiplication of this valuable race, in those parts of America, where the population is not dense, and where a market for flesh cannot be found. He even ventured to suggest the mode, by which, *he supposed*, the excellence of the fleece might be secured. It has been seen, that his opinions are sustained by the best European and American authorities, by scientific as well as practical men; by breeders, wool growers and wool staplers; and that they are sanctioned by the most important agricultural associations, the Bath Society, and the British Board.

Columella says—"the essential value of the Merino is in the fleece." With this opinion Mr. Powel certainly will not contend. But Columella proceeds—"the difference between that of a fine and an indifferent one may be estimated from the fact, that one class of wool makes cloth worth ten dollars per yard, while another class, to an unskilful eye not perceptibly coarser, makes cloth worth six dollars."

Has he not forgotten the larger quantity of wool, independent of the good flesh, afforded by certain breeds, and various important manufactures, in which fine wool *cannot* be employed? If a man have not ten dollars, is he to go without a coat? Are the slaves of the South, the labourers, artificers, farmers, sailors, are the productive classes in the North to go naked or wear fine coats? Are they not to be regarded when imposts for exclusion, are forced upon the products of European industry, for which their wages in producing the "luxuries of the rich" might be exchanged?

Are not the beds of the poor to be covered with blankets? Will not the luxury of the rich require their floors to be decorated with carpets? And will not the poor require food and raiment whilst ministering to their real or imaginary wants? Are not then, the carcass, and the *weight* as well as fineness, of the fleece to be estimated, in the husbandman's account?

Columella quaintly continues, "we might as well be told, that we ought to raise rye instead of wheat, as coarse wool instead of fine, because the first was used by the poor chiefly—or that instead of our feeding cattle with a view to increase the proportions of their most valuable parts, (which are paid a high price for, and consumed by the rich,) it would be as well to have all necks and shins to feed the poor with."

But would he assert, that in the neighbourhood of large towns, where *the straw of rye is nearly as valuable as the grain which it bears, or where the land is not fitted to bear wheat,* the farmer should in opposition to his interests grow wheat, because the *farinaceous matter* of rye is less valuable when procured? Would he feed his horses and slaves upon wheat? Should neither rye, buckwheat, oats nor Indian corn be grown? And would he imply, by way of corollary, that "necks and shins" are nutritious, as sirloins and rumps, and should be enlarged for the consumption of the poor, before they had been taught, to feed upon offal or masticate bone?

Columella sagaciously remarks at the close of his second number—"In selecting, therefore, strict attention should be paid to these properties; and as the inspection of the wool over the whole body of the sheep, will be the best possible guide to determine *the value of the animal,* there is no occasion for examining other marks—such as the yolk, dewlaps, and woolly heads. I should as soon think of judging of a piece of cloth, by the colour or quality of the packing around it, as to look for such marks when the wool could be seen."

When packages of cloth shall have been gifted with *generative powers,* some analogy in Columella's illustration may be found. Have we not learned, that all breeders are guided by characteristic marks, when seeking purity of blood? His rule, may assist skin dealers and drovers, but it can never be adopted by an "intelligent breeder" until he shall have been "taught" that experience should yield to the ingenious speculations of "public spirited" but "unskilful" men.

Packages of cloth, are valued for qualities, most of which are evident and external. They are not regarded for intrinsic properties; yet the mark of a well known manufacturer, whose cloth had always been good, it is to be presumed, would not be entirely overlooked, as all the qualities of cloth, even its durability, the fastness of its colours, cannot, by mere examination be ascertained.

But when *animals* are to be selected, valued for properties which are inherent, excellence which has been determined, *and is to be continued, throughout generation after generation,* external *characteristic* marks, must be observed as indicative of their presence, *or the purity of blood.* I would inquire whether an improver of horses, skilled in his art, could be tempted to breed for the purposes of the turf, from an animal, whose neck was loaded with a bushy mane, whose fetlocks and legs were encumbered with coarse and rough hair, although he had the symmetry of the Godolphin Arabian, throughout his whole form—or whether, if he desired the patient, and heavy horse of Suffolk, for draught, he would overlook the ample mane, or large tufts which invariably attend the thorough bred animals of that race. Or would any man, whether "speculative" or practical, disregard the flat nose, thick lip and "woolly head" of the African, the straight hair and prominent nose of the American Indian, if seeking on the confines of Georgia, an individual of either race, where intercopulation frequently causes amalgamation of features, if I may be allowed the phrase, and various tints, from that of the sooty negro, to the bright colour of the lord of the American woods.

How do naturalists class animals? Without entrenching upon the prerogatives of the learned in phrenology, my experience as "a breeder," has taught me, that external characteristics, are the surest, although not the only, tests of *inherent properties,* of every quadruped race.

Hereafter, probably, this intelligent and interesting writer may be taught, that the family of sheep, which called forth his observations, is one of an inferior race of Merinoes, or possibly it may be a new variety, superior to those, with which the various writers who have been quoted, the wool staplers and breeders who have been cited, have had the ill fortune to meet.

Curwen.

SOUTH CAROLINA AGRICULTURAL SOCIETIES.

Report of the Meeting of the Delegates of Agricultural Societies, held at the Carolina Coffee house, in Charleston, on Wednesday, Feb. 22, 1826, pursuant to public advertisement.

In the course of the past year, the Agricultural Society of St. John's Colleton, addressed a circular to her sister societies in the state, enclosing the following preamble and resolves:

"Whereas, the blessings which agriculture, under divine favour, is calculated to bestow upon man, are so rich and manifold, as almost, if not entirely to exceed his capacity either to enumerate or appreciate; and which, whilst they should lead us to express a sincere and heartfelt gratitude to the giver of every good and perfect gift, should also cause us to consider it as the bounden duty of every man, to use his utmost efforts to promote its best and most permanent interests. And whereas, under a government like that with which these United States are blessed, it is peculiarly fitting that we should encourage and cherish a love for agriculture, as an attachment to the soil begets an ardent love of country, and the cultivation of it is strikingly adapted to the creation and maintenance of a bold, hardy, independent and patriotic militia, who would not only be fully competent to defend our country in case of foreign invasion; but also to secure it against refractory and aspiring demagogues at home. The truth of this position has been too often illustrated to need further proof in confirmation of it. And whereas, by the powerful effects of preconcerted and united measures, commerce has ever secured to itself the countenance and assistance of protecting laws; and like patronage is now extended to domestic manufactures, whilst agriculture, the parent and nourisher of rational liberty, is left to struggle, as it were, for its very existence, unaided by any legislative interference, rendering it thereby imperiously necessary for its *friends* and *supporters* to step forward in its behalf, to secure to it all the benefits which can flow from the concerted and systematic measures of the wise and prudent.

"Therefore, *Resolved*, That this society recommend to her sister societies throughout the state, to send three delegates, chosen from among their members, to meet at Columbia during the session of the Legislature, who shall constitute a society, which shall be known by the name of ————, whose especial duty it shall be, to watch over the interests of agriculture—to suggest, when necessary, the passage of laws which might advance its interests, and to collect information upon all subjects connected with their official duties, from every available source; which, by being communicated to the individual societies of which they are members, would of consequence, result in such a mass of agricultural information as would, in due course, give rise to systems of agriculture, and rural economy generally, of such unerring a character, as would secure to the active operator all the success to his labours, which would be left within the control of man.

"Also *Resolved*, That the third Wednesday in February next, being the 22d of the month, and the first Wednesday of the races in Charleston, be recommended as the day on which the delegates of those agricultural societies, that may adopt the foregoing resolutions, shall assemble at Charleston, with a view to framing a constitution and by laws for the government of the society contemplated to be established.

Signed, WM SEABROOK, *President.*
Isaac Auld, *Cor. Sec'ry. A. S. St. John's Colleton.*"

The important measure proposed by the St. John's Colleton Agricultural Society, was concurred in by the following societies appointing three delegates to represent them at the intended meeting. At the hour appointed, the following gentlemen attended in behalf of their respective societies:

St John's Colleton—Whitemarsh B. Seabrook, John R. Mathewes and Joseph Whaley.

Pendleton—Thomas Pinckney, jun., and John E. Colhoun.

South Carolina—William Washington, Edward Brown and James Cuthbert.

Barnwell District—John S. Bellinger and Barnet H. Brown.

St Helena—Charles G. Capers, Thomas Aston Coffin and Charles W. Capers.

St Paul's—Charles E. Rowand.

Colonel Thomas Pinckney was called to the chair, and Edward Brown appointed secretary; when Mr. Whitemarsh B. Seabrook addressed the meeting, explanatory of the object for which it had been convened, and of the importance of a general Society to the agricultural interests of the state; after which the following resolutions were unanimously carried:

Resolved, That a committee be appointed to report a constitution for an United Agricultural Society in this state; and that the chairman be requested to nominate one delegate from each society represented at the meeting, to act as the committee.

Resolved, That Whitemarsh B. Seabrook, John E. Colhoun, Edward Brown, John S. Bellinger, Charles G. Capers and Charles E. Rowand, do constitute a committee for the purpose above stated.

Resolved, That the chairman be requested to become one of the committee.

Resolved, That this meeting do adjourn to meet again on Friday evening next, at six o'clock.

Signed, THOMAS PINCKNEY, Jr.
Edward Brown, *Sec'ry.* *Chairman.*

At the adjourned meeting, held agreeably to the last resolve of the previous one, the Beaufort Agricultural Society was represented by Mr. Barnwell, one of its delegates, attending. Dr. Scriven, the president, Mr Frederick Fraser, the corresponding secretary, and Messrs. James Heyward and James Bowman, members, of the Barnwell District Agricultural Society, attended the meeting, and expressed their concurrence in its object and proceedings. The committee presented through their chairman its report, which was approved and accepted by the meeting.

Report.

The committee appointed to prepare and digest a plan of association for the agricultural societies of this state, beg leave to report, That with a view to insure the accomplishment of their object, they have deemed it advisable, by avoiding all unnecessary detail, to draft such articles of association only, as are essential to the organization of the contemplated union. Your committee are decidedly of opinion, that it would be legislating injudiciously, to attempt at this time to effect all the important measures in prospect. To progress with due caution, and to consult the general feeling of the community, they are persuaded, is the proper course to be pursued.

At the first conference, certain difficulties presented themselves relative to the location of the Association, and the manner in which the annual contribution of each society should be apportioned. From the disposition of the committee, however, to yield all sectional predilection, and to remove every impediment in the way of their purpose, those difficulties have happily been removed.

As the proposed plan of union is to be submitted to every agricultural society of this state, for their approbation and sanction, it is confidently anticipated that no minor consideration will deter them from promptly giving their assent. The individual societies possessing the right of offering amendments to the contemplated constitution, the general meeting, at its first session, will thus be enabled to avail itself of the information and experience of the whole agricultural community; and hence, to devise a more enlarged and efficient scheme of government.

When the first meeting shall have been held, your committee conceive, that the greatest difficulty will have been surmounted. The feelings incident to such an interesting assemblage, would alone create an excitement, highly favourable to the accomplishment of their general views.

The agriculture of South Carolina may be said to be confined to particular districts. While in one direction, the scene that opens to our view is bright and cheering, in many sections of the state, dilapidated houses, and abandoned farms, show the prostration of a system, which, for causes not now necessary to be detailed, the wisdom and foresight of the constituted authorities should have been exerted to prevent. Shall the sites, once the seat of industry, wealth and health, be restored to their pristine beauty and fertility; or shall they be destined to become the residence of the "banditti of the black?" Shall an useful class of the community continue to grope in the labyrinth of Ethiopian stupidity, or shall they be instructed in the theory and practice of that profession, whose duty they now but nominally perform? Is agricultural science, by nature, circumscribed within narrow limits, or can its countless blessings be disseminated by private zeal or public patronage? Are the farmers of this state so dead to their true interests, that they cannot be aroused to a simultaneous movement in the sacred cause of their vocation? To these questions, let the intelligence, the patriotism and the pride of South Carolina respond.

That the proposed union may tend to promote the welfare of every class of the community—to meliorate the physical condition of the state, and to place South Carolina on an eminence still higher than the elevated ground she now occupies, is the fervent prayer of the committee, individually and collectively.

WHITEMARSH B. SEABROOK,
Edward Brown, *Chairman*
Secretary to the Committee.

A constitution for the government of the contemplated Society, was next presented, which, having been considered by sections, and a few slight amendments proposed, was finally agreed to in the following form, to wit:

The undersigned agricultural societies, with a view to establish an union, to insure an accordance in their sentiments and measures, to found an agricultural school and a professorship of agriculture, to collect and disseminate information, and the more effectually to promote the permanent interest of their creation, do agree to unite under the name and style of the *United Agricultural Society of South Carolina;* and to adopt the following as their articles of association.

Article I. There shall be held annually on the first Monday in December, a general meeting of the societies by delegation at Columbia, S. C.

Art. II. It shall be incumbent on the societies composing the union, each, to appoint not less than two or more than five members; and it shall be their duty to furnish the delegates with a certificate of their appointment after the following form: At a meeting of —— ——, on the —— day of ——, 18—. A. B. C. D. &c. were duly elected delegates to represent this society, on all meetings of the United Agricultural Society of South Carolina, for two years, commencing from the first Monday in December next.

Art. III. The officers of the society shall consist of a President, two Vice Presidents, Treasurer, Recording Secretary and Corresponding Secretary, and a Committee of Communications, to be composed of one delegate from each society.

Art. IV. It shall be the duty of the President to preserve order in the general meetings, and to perform all other duties appertaining to his office.

Art. V. In the absence of the President, at any meeting, the senior Vice President to take the chair; and in the absence of the President and Vice Presidents the meeting to appoint a Chairman from among the members present. If any other officer is absent, the society shall nominate a member to supply the vacancy, *pro tempore.*

Art. VI. The Recording Secretary shall faithfully register the proceedings of the society, and preserve all papers that may be entrusted to his charge.

Art. VII. It shall be the duty of the Corresponding Secretary to carry on the necessary correspondence of the society; and, when directed, to transmit to each society a copy of the several papers which may have been transmitted to the general meeting. The corresponding secretary shall be, *ex officio*, a member of the Committee on Communications.

Art VIII. The Committee on Communications shall prepare and digest all papers ordered for publication, and perform such other duties as it may be directed to discharge.

Art. IX It shall be incumbent on the societies composing the Union, to transmit to the United Society, at the meeting in December, a fair copy of all the important original communications which may have been read before them.

Art. X. Any society formed for the same general objects may become a member of the Union by sending delegates to the general meeting, who shall subscribe to these articles for their society.

Art. XI. The delegation from each society, at the first general meeting, shall have *one* vote.

Art. XII. Until the society shall adopt a plan of raising funds to meet its exigences, each society who shall agree to send a delegate or delegates, and sign these articles, shall pay to the Treasurer of the United Society the sum of twenty dollars, at the meeting in December next.

Resolved, That it shall be the duty of the Secretary of this meeting, to transmit to the president of every society here represented, and all other agricultural societies in the state, copies of our proceedings for approbation and ratification; and upon the receipt of their acceptance or rejection, it shall be his further duty to communicate the information to each society who shall have consented to the Union.

Resolved, That to carry these articles of association into effect it is necessary that *five* societies should consent to their ratification.

Resolved, That the Secretary be instructed to publish 150 copies of the proceedings of this meeting, for the information of the agricultural societies of the state; and that the editors of newspapers in this city, the editor of the Carolina Journal, Columbia Telescope, and American Farmer, and editors of newspapers in this state friendly to the object of the meeting, be requested to publish this report.

Signed, THOMAS PINCKNEY, Jr.
Edward Brown, *Sec'ry.* *Chairman.*

SCIENTIFIC MEMORANDA—APPLICABLE TO RURAL ECONOMY.

(Continued from p. 402.)

Manures.

"Where vegetable substances are decomposed by fermentation, there is a quick union of oxygen and carbon; and this carbonic acid gas, called formerly fixed air, rises up in vapor, and flies away. But when this process goes on more slowly, as in a dunghill lately turned over, or in black garden mould lately turned over, and thus exposed to the air, much of which remains in the cavities of the hot bed or border, this carbonic acid is slowly produced, and is absorbed by vegetable roots, I suppose in its fluid state, or dissolved in water, before it acquires so much heat as to rise in the atmosphere in the form of gas. This carbonic acid gas in its fluid state, or dissolved in water, not in its ærial or gaseous state, is the principal food of plants, as appears, because their solid fibres consist principally of carbon, and their fluids of water." *Darwin's Phytologia*, x. 5.

This explains the importance of excluding heat and air (necessary agents in fermentation) from yard dung, by a good coat of straw and stack litter, or by a covering of earth, until the farmer is ready to cart it to his field; and of immediately covering it with the plough, and planting upon the soil;—for it should not be forgotten that *long* manure is best applied to hoed crops; and after nourishing these, it is as useful for small grains, as the *rotted* manure that has fermented in the yard.

Advantages of stirring the soil.

"The azote [nitrogen] of the atmosphere, when air is confined in the interstices of the soil newly turned over by the plough or spade, contributes to the production of the nitrous acid by its union with the oxygen of the atmosphere, with which it was before only diffused, or with the much greater source of oxygen from the decomposing water of the soil. At the same time another part of the abundant azote combines with the hydrogen of the decomposing water of the soil, and produces ammonia, or volatile alkali; which contributes to the growth of vegetables many ways, as already described."—*Id.* x. 9.

This explains one of the benefits which result from frequently stirring the ground among growing crops. Farmers of the old school cautiously avoid hoeing their crops in a dry time, and often carry the error so far, as to refrain extirpating weeds during a drought, under the idea that both operations dissipate the little moisture in the soil, and that weeds are beneficial in protecting it from the intense rays of the sun. Science, as well as practice, has demonstrated, that crops are materially benefited by having the earth frequently stirred, with the plough, harrow, or cultivator, even in the dryest season, provided it is not uselessly raised in hills and ridges, and that the benefit is increased if the operation is performed while the dew is on the ground. Cabbages, ruta baga, &c. will grow better in a field, where this operation is frequently performed with a plough, &c. than in a better soil in a garden, where the hoe is less used. Curwen's experiments are conclusive as to the utility of frequent ploughings. He put cabbages on a few acres of stiff clay, and the plants had a very meagre appearance till he put the plough to work; but by the frequent use of this, in both directions of the field, the crop became astonishingly great, notwithstanding dry weather, and many of the cabbages weighed 50 lbs. Another well authenticated fact in point, took place 20 miles from me. A field had been worn out by tillage, and the proprietor gave a poor neighbour permission to try a crop upon it. As the latter was a day labourer, he had no time to plough except before sunrise. He persevered in this way until he got in a crop of wheat, which, to the astonishment of the neighbourhood, turned out very abundant in its product. This could be ascribed to no other cause than turning the soil repeatedly while the dew was upon it.

Water.

Few persons appreciate the importance of good water, which is not only essential to health, but necessary in most of the manipulations of the manufacturer, where water is employed as an agent—"We could easily account for all the bad effects of water on the human body, and show that by the separation of the acid from the terrestrial base, which will happen in the body, several diseases must arise. These unwholesome effects of hard water may be prevented by previously mixing alkaline salts with it." *Home's experiments*, p. 295. Parkes recommends barytes, pearlash, oil of vitriol, fresh burnt lime, &c. to purify bad water; but as their use requires chemical knowledge, and the directions for using them are too lengthy to be transcribed, I refer those to his essay on water, who wish for further information. But to enable persons to ascertain the kind of impurity with which water is impregnated, I subjoin his table of chemical agents, which are to be used in the order in which they stand.

Oxalic acid, or any of the oxalites	Will discover.	Lime, or either of the salts of iron.
Infusion of litmus, or syrup of violets, or infusion of red cabbage leaves,	—	Uncombined acids.
The same, slightly reddened by vinegar or tumeric paper.	—	Pure alkalies & pure earths.
Muriate of platina	—	Potash, or the salts of potash.
Acidulous nitrate of silver. - - - - - -	—	Muriatic acid, or the muriatic salts.
Muriate of barytes.	—	Sulphuric acid, or the sulphuric salts.
Lime Water. - - -	—	Carbonic acid, magnesia and alumine.
Acetate of lead. - -	—	Sulphuretted hydrogen
Muriate of lime. - -	—	Carbonated alkalies.
Polish'd iron or steel	—	Sulphate of copper.
Phospate of soda. -	—	Magnesia.
Sulphuret of potash.	—	Lead.

YELLOW TOBACCO.

[Extract from an experienced dealer and planter, whose opinions, like his integrity, are entitled to the highest respect.]

Nottingham, Feb. 8, 1826.

The finer qualities, in which alone your Ohio friends are interested, are only used by the wealthiest families in Germany, Sweden, Denmark and Russia, and but sparingly. It comes immensely high; of course beyond the reach of nine-tenths of their population. Most of it is first shipped to Bremen, from whence it finds its way all over Europe. There is but little doubt on my mind, if Ohio should furnish a few thousand hogsheads of that description, it will reduce the price to about ¼ of its present value; and whenever the growth of Maryland and Ohio together exceeds 25,000 hhds. a reduction follows of course, and in proportion to the excess. The consumption of these sorts in every part of Europe, at the maximum, does not go beyond 25,000; indeed it would be safer to estimate it at 20,000 hhds. The surprising reduction in the article that occurred in 1820, from an average of $12 to $14, suddenly down to an average of 4 to $5, arose from the circumstance that the crops made the year before, amounted to about 30,000 hhds.; and our own state, with an average crop, is fully equal to the whole consumption of the world of that particular kind. This fact is at once known to the consumers in Europe, and they govern the prices accordingly. The merchants in Holland are in the habit of publishing monthly reports, of the stock on hand, as compared with the same period the year before. Whether this practice has grown out of legal enactments or custom, I know not, but it certainly has the effect of keeping the foreign merchants and consumers well informed. If 25,000 hhds. be fully equal to the consumption, and this state under tolerable circumstances will produce that number, indeed generally exceeds it, what can the citizens of Ohio promise themselves by going extensively into the culture of this article? The thing is ridiculous. One stout crop in each state would reduce the price to about $3 per hundred, or less. Will the expense of carriage from that state afford any thing like profit at that rate? The statements here made are incontrovertible, and known to every intelligent man who has any experience in the business. As a faithful sentinel to the agricultural interests of this country, you are bound to proclaim these truths from the house-top, that you may protect the unwary from disappointment and ruin.

LARGE HOGS.

Brook Hall, Washington county, Va. Feb. 26, 1826.

Mr. Skinner,

Sir,—In your Journal I see that it is the practice of your subscribers to acquaint you of the animals that are above the ordinary size. I sold a hog unusually large, for one hundred dollars; he was as to size, 6 feet 9 inches, from the end of the snout to the root of the tail; 3 feet 4 inches high, nearly 9 feet in circumference. I weighed him about 22 months before I sold him and he then weighed 737 pounds, he was not fat when sold; I think if he is made fat he would weigh 13 or 1400 lbs. I killed two since, one weighed 535 lbs. and one 457 lbs. These two were fed on the farm only about 3½ months; raised without feed, only what they got in the range; they were a little above two years old when I killed them the other day. If you think this interesting, you may insert it in the Farmer.

I am your obedient,

WM. BYARS.

HORTICULTURE.

From the Westminster Review—London.

HISTORY OF ANCIENT AND MODERN WINES.

By Alexander Henderson, M. D.

(Concluded from page 405.)

In the Eleventh chapter, Dr. Henderson enters into a long and elaborate history of the culture of the vine, and the various wines used at various periods, in England; the substance and result of the last and principal portion of this chapter may be given in a few words, "for 500 or 600 years, the light growths of France and of the banks of the Rhine, were imported in largest quantity. During this period, the sweet wines of the Mediterranean and the Archipelago were held in high estimation: then came the dry wines of Spain. At the close of the 17th, and beginning of the 18th century, the red growths of the Bordelais were in the most frequent demand. The subsequent wars with France and the Methuen treaty introduced Port wines; sweet wines were no longer sought after Very lately the taste for light French wines is revived."—p. 318—319.

With respect to the introduction and the cultivation of the vine in England, Dr. Henderson thinks that the *Brittanni*, to whom with the Gauls, Spaniards, and Pannonians, Probus granted the privilege of cultivating the vine and making wine, were the inhabitants of part of Belgic Gaul, and not Britain.* But the Brittanni of Pliny, to whom he and his authority, Mr. Daines Barrington, allude, were a small and insignificant tribe, who would not be ranked with the nations of Germany, Gaul and Spain; besides they inhabited the country adjacent to the Scheld, a climate as little favourable to the vine as Britain. We may add, the privilege was granted by Probus to his disbanded legions, and the Vandals and Burgundians, part of them, were sent into Cambridgeshire, where their descendants are said to be still distinguished by their light yellow hair, and the traces of their original language. Now, the Isle of Ely, in that county, was named, in the early times of the Normans, Isle de Vignes, the bishop receiving three or four tons for his tenth.† There can be no doubt that wine was regularly made at the greater abbeys in the southern part of the kingdom, in the eighth and ninth centuries. In the twelfth, vineyards had extended over large tracts of country. The acquisition of Guienne in 1152, by introducing French wines, checked the home growths. In 1355, choice Rhenish wine was so much prized in England, that Edward III. wrote himself to the princes of Germany, to secure the safe transit of some intended for his own use.‡ In 1469, some varieties are particularized for the first time; this leads Dr. Henderson to inquire into their characters. these are Romanée, Bastard, and Osey. The two former are supposed to have been Spanish wines; in support of this opinion, we may refer to the articles exported from Spain in 1537, as enumerated by Capmany.§ Burton, in his "Anatomy of Melancholy" (i. 108,) classes the Romanee and Brown Bastard with Muscadine, Malmsey, Alicant, and other strong thick drinks.

Dr. Henderson has fallen into a strange mistake with respect to the country of Osey, he concludes it to have been an Alsatian wine; he grounds this opinion on a passage in Vallois' Description of France; in which it is stated that Osey, Aussois, and Auxois, are names of the same place, and that Auxois is the same as Pagus Alesiensis, which took its name from Alesia, all the steps here are correct except the last. Alesia is not Alsace, but a part of the Coté d'Or, in Burgundy, so that Osey was a Burgundy wine.¶

Dr Henderson enters on a learned dissertation respecting Sack, which he concludes to have been a wine, at the same time both dry and sweet, that is, when it became old. this seems the most probable opinion: in support of it we may state, that, according to Fisher [*Travels in Spain*, p. 314,] Xeres, when old, is called Xero seco.

Champaigne wines were probably introduced into England by the restored courtiers of Charles II. Dr. Henderson says the name does not occur in the Mystery of Vintners, 1692: but that they were imported before that, by wine merchants, appears from the British Merchant [i. 342;] and at the very beginning of the eighteenth century, they are repeatedly mentioned in comedies as fashionable, and the tavern in London where they could be produced of the best quality specified.*

Port wine was not wholly unknown prior to 1693, as Dr. Henderson concludes from the "Farewell to Wine;" and though the bon-vivants might then deem it 'spiritless and flat," it had already obtained a high character as a salubrious and medicinal wine, being ranked in the London Dispensary, published 1684, the sixth in a list of nine chief wines in these respects—p. 182.†

The introduction of Madeira, ascribed by Dr. Henderson to our officers who had served in the West Indies about the middle of the last century, we rather think was brought about by West India merchants and planters, on their settling in this country: at this time they certainly introduced turtle.‡

The Twelfth chapter, on certain modes of keeping and mellowing wines, is partly theoretical, and partly practical: the phenomena of the secondary fermentation are investigated; and this portion of the chapter together with that part of the introduction, which relates to vinous fermentation, gives nearly all we know, or can fairly conjecture, on this still obscure topic. A curious and important experiment of Dr Soemmering is related: by putting wine into a glass covered with a bladder, it attained the same degree of mellowness in a few weeks or months, which, when kept in the usual way, it would only have attained in as many years: the proportion of alcohol is very much increased by this process. This process appears very mysterious, and has not been explained by Dr. Henderson. The solution is, however, sufficiently simple, and has been given by Dr M'Culloch. Membrane consists chiefly of gluten, it contains a large portion of that substance, compared to its fibrin, as happens in the case of skin. Now water has a great affinity to this compound, but alcohol has none. Hence, in the act of evaporation from the confined fluid, the watery part unites to the bladder, while the alcohol is rejected; and the bladder, thus saturated with water, becomes itself an evaporating medium, whence it operates as a perpetual organ of transmission between the watery part of the wine within, and the atmosphere without. Thus, while the water alone escapes, the alcohol is retained, and the wine increases in strength until the balance of affinities puts a stop to the process.

We pass over the Thirteenth chapter, on the mixture and adulteration of wines, which, besides curious particulars respecting fictitious wines, contains some rules for detecting adulteration, and for bettering wines;* and the first part of the concluding chapter on the dietetic and medical qualities; in order to extract what Dr. Hales says on the comparative virtues of some of the principal wines:

"1. Among the brisk wines, those of Champaigne, though not the strongest, may be considered as the best; and they are certainly the least noxious, even when drunk in considerable quantity. They intoxicate very speedily, probably in consequence of the carbonic acid gas in which they abound, and the volatile state in which their alcohol is held: and the excitement is of a more lively and agreeable character, and of shorter duration, than that which is caused by any other species of wine, and the subsequent exhaustion less. Hence the moderate use of such wines has been found occasionally to assist the cure of hypochondriacal affections, and other nervous diseases, where the application of an active and diffusible stimulus was indicated. They also possess marked diuretic powers. The opinion which prevails, that they are apt to occasion gout, seems to be contradicted by the infrequency of that disorder in the province where they are made; but they are generally admitted to be prejudicial to those habits in which that disorder is already formed; especially, if it has originated in addiction to stronger liquors. With respect to this class of wines, however, it is to be observed, that they are too often drank in a raw state, when, of course, they must prove least wholesome; and that, in consequence of the want of proper cellars, and other causes which accelerate their consumption, they are very rarely kept long enough to attain their perfect maturity. It is also worthy of notice, that, in order to preserve their sweetness and promote effervescence, the manufacturers of Champaigne commonly add to each bottle a portion of syrup, composed of sugar candy and cream of tartar; the highly-frothing kinds receiving the largest quantity. Therefore, contrary to the prevailing opinion, when the wine sparkleth in the glass, and "moveth itself aright," it is more to be avoided, unless the attribute of age should counteract all its noxious properties.

"2. The red wines of Burgundy are distinguished by greater spirituosity, and a powerful aroma; owing, perhaps, to the predominance of the latter principle, they are much more heating than many other wines which contain a larger portion of alcohol. Though in the time of Louis XIV. they were prescribed in affections of the chest, no physician of the present day, would dream of giving them in such cases. The exhilaration, however, which they cause, is more innocent than that resulting from the use of heavier wines. The better sorts may be sometimes administered with advantage in disorders where stimulant and sub-astringent tonics are required. The same observation will apply to the wines of the Rhone, and the lighter red wines of Spain and Portugal.

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* Probus is supposed to have granted this privilege to replace the vineyards destroyed by a decree of Domitian, but this decree was not carried into execution, the emperor having been frightened by a Greek pasquinade, intimating that, notwithstanding his decree, there would be still as much wine made in Italy, as would be sufficient to mix with poison to take him off (Sueton. Domit. vii. 16). Philostratus says, the Ionians sent an embassy to Domitian, and thus gained an exemption from the decree.—De Vita Apollon. Tyan. Lib. vi. c. 17.

† Dr. Clarke's Travels, viii. 106. Note Holinshead's Description of Britain, p. 111.

‡ Anderson, i. 312. In 137[illegible], Rhenish wine was shipped from Hull to Prussia.—Id. p. 574.

§ Capmany, Questiones Criticas p. 16, 'vinos bastardos y romanias.' Are these the same wine, under different names, or different wines? Those languages which have distinct conjunctions to express different things, and different names of the same thing, as the Latin vel and aut, have the advantage over those which, like the English, have but one conjunction for both, viz. *or*.

¶ [illegible], Dict. [illegible] Géograph. Ancien et Moderne, at word Alesia, Auxois, and [illegible] Thesaur. Geog. in voc. Alesia. [illegible] we [illegible] in [illegible] history of the [illegible] of Moselle wine. [illegible] was the name in the middle ages for the town of [illegible] in Berry, not far from Poitiers, still noted for wine.—Bo[illegible] in v[illegible]

* Epilogue to the "Constant Couple:" Song in "The Man of Mode," Act iv., Scene 2.

† Canary, Malaga, Alicant, Tent, Sherry, Portoport, Rhenish, Florence, French, white and red: Sir Francis Brewster (who, as well as his father before him, seems to have been an extensive importer of wine,) in his Essays on Trade, 1702, says, that the Portuguese had wisely laid hold of the opportunity the former war had put into their hands, to increase their vineyards—p. 37. See also Carey on Trade, 1695, pp. 117, 120.

‡ There is a most admirable picture of a Turtle Feast, in the "World," No. 123, 1755 the manner of importing, keeping, and cutting up the turtle, and the preparations for the feast, by putting on *turtle cloaths*, are described with wonderful effect, the paper is by Mr. Owen Cambridge: he mentions the importation of turtle as an improvement in the modern kitchen of recent date. Turtle feasts are mentioned in the Connoisseur, No. 19, 1754, and No. 87, 1755. Old Madeira seems to have been the [illegible] about this time see the Journal of a [illegible] of Cambridge by Warton, in the Idler, No. 33, 1758. Hermitage is mentioned in the Tatler, No 131, 1709-10. Tokay in the Connoisseur No. 137, 1756.

* The modes of adulterating wine, and the statutes against it, are mentioned, pp. 298, 337, 359. The most severe statute against the practice is that of James III. of Scotland, by which the punishment of death is adjudged to all who bring home corrupt or mixed wine, or buy or sell, after it is declared to be such, or mix wine or beer (Stewart's Index to the Scots, Acts, Art. Wine.) In the "World" Nos. 90, 91, is a lively picture of a modern symposium, (1754) from which it appears, that Benicarlo was employed to adulterate Claret, and Chios, Chateau Margaux.

"3. Possessing less aroma and spirit, but more astringency than the produce of the Burgundy vineyards, the growths of the Bordelais are, perhaps, of all kinds, the safest for daily use; as they rank among the most perfect light wines, and do not excite intoxication so readily as most others. They have, indeed, been condemned by some writers, as productive of gout; but, I apprehend, without much reason. That, with those persons who are in the practice of soaking large quantities of Port and Madeira, an occasional debauch in Claret, may bring on a gouty paroxysm, is very possible: but the effect is to be ascribed chiefly to the transition from a strong brandied wine to a lighter beverage—a transition almost always followed by a greater or less derangement of the digestive organs. Besides, we must recollect, that the liquor which passes under the denomination of Claret is generally a compounded wine. It is, therefore, unfair to impute to the wines of the Bordelais those mischiefs which, if they do arise in the manner alleged, are probably, in most instances, occasioned by the admixture of other vintages of less wholesome quality.

"4. The wines of Oporto, which abound in the astringent principle, and derive additional potency from the brandy added to them previously to exportation, may be serviceable in disorders of the alimentary canal, where gentle tonics are required; but the gallic acid renders them unfit for weak stomachs: and what astringent virtues they shew, will be found in greater perfection in the wines of Alicant and Rota, which contain more tannen and less acid. The excitement they induce is of a more sluggish nature, than that attending the use of the purer French wines, and does not enliven in the same degree. As a frequent beverage they are, unquestionably, much more pernicious.

"5. For a long time the vintages of Spain and particularly the sacks, properly so called, were preferred to all others for medicinal purposes. The wines of Xeres still recommend themselves by the almost total absence of acidity.

"6. Of all the strong wines, however, those of Madeira, when of good quality, seem the best adapted to invalids; being equally spirituous as Sherry, but possessing a more delicate flavour and aroma, and though often slightly acidulous, agreeing better with dyspeptic habits. Some have thought them beneficial in cases of atonic gout, probably without much cause; for, whenever a disposition to inflammatory disorder exists, the utility of any sort of fermented liquor is very doubtful.

"7. The lighter wines of the Rhine, and those of the Moselle, are much more refrigerant than any of the preceding, and are frequently prescribed, in the countries where they grow, with a view to their diuretic properties. In certain species of fever, accompanied by a low pulse and great nervous exhaustion, they have been found to possess considerable efficacy, and may certainly be given with more safety than most other kinds; as the proportion of alcohol in them is small, and its effects are moderated by the presence of free acid. They are also said to be of service in diminishing obesity.

"8. It is difficult to conjecture on what circumstances the ancients founded their belief in the innocuous qualities of sweet wines, contrasted with the drier and more fully fermented kinds. They may not intoxicate so speedily, and, as they cloy sooner upon the palate, are, perhaps, generally drunk in greater moderation. When new, they are exceedingly apt to disorder the stomach; and, when used too freely, they produce all the same effects as the heavier dry wines. In their more perfect state, they may answer the purpose of agreeable cordials; but, as the excess of saccharine matter retards their stimulant operation, they ought always to be taken in small quantities at a time"—pp. 355, 356.

The style of Dr. Henderson's work has the merit, no common one at present, of being perspicuous, correct, and in good taste. The subjects of the wood engravings, both vignettes and initial letters, are extremely appropriate; and their execution does very great credit to the artist, Mr. W. Harvey.

CULTIVATION OF THE CRANBERRY.

Mr. Skinner, *Albany, March* 3, 1826.

I state, for the benefit of R. B. D. and of others who may be disposed to cultivate the cranberry, (*oxycoccus macrocarpus*,) that five years ago, I put out a small bed of these plants in my garden, upon a moist border of loam, on the north side of a board fence that I added to the plantation the spring following. Most of the plants lived, and were uncommonly thrifty for two years. The blossoms and fruit were comparatively few in number, though the latter was large. The runners were very luxuriant and soon formed a thick matting on the ground, and to this circumstance I ascribed their shyness in bearing. If planted at two feet upon a moist loam, and the runners cut in moderately after the crop is taken off, I think they would produce well. I gave up my plantation because I had them growing spontaneously on my farm. I was led to make the experiment from observing them grow on soils which most of the year were no more than moist.

J. BUEL.

INTERNAL IMPROVEMENT.

Internal Improvement in Pennsylvania.

It is confidently hoped that the very satisfactory information contained in the annexed communications from the highly-gifted citizen, to whose zeal and energies, those splendid works, the New York canals, are mainly owing, will remove the doubts of the most sceptical, as to the propriety of promptly engaging, with all the capacities and resources of the state, in the construction of the great Pennsylvania canal.

The tolls on the New York canal have been—

In 1822	$64,071
1823	153,097
1824	340,642
1825	520,000

Thus increasing with a rapidity almost unexampled. In a few years, the tolls will provide a fund to sink the debt contracted for the work, and at no distant day defray the entire expenses of the government. The interest on the canal debt at present is $375,823—and the expense of toll-keepers, &c. about $100,000. Should Governor Clinton's expectation of $800,000 for tolls this year be realized, there will then, at so early a period, be a surplus of no less than $324,177 on the mere tolls, towards the establishment of a sinking fund.

On these facts two all important considerations present themselves:—

1. The canal tolls last year, deducting the expenses of collection, &c. are *nearly five per cent. on the whole cost of those advantageous and important works!! This year they will probably produce eight per cent.!*

2. The surplus of this year, beyond the interest and expenses of collection, will be, according to Gov. Clinton's calculations, *very nearly equal to the expenses of the government of Pennsylvania for the year* 1824, deducting the extraordinary ones for internal improvements and building penitentiaries! *The amount of payments for ordinary expenses was only* $824,289.

It ought to be constantly borne in mind that the Pennsylvania canal will have immense advantages over the Erie canal, not only in point of proximity as regards the trade to the western states, but as regards the traffic of the two states. There is every reason to believe, from the different transhipments that will be required to convey produce from the Ohio canal to New York, that even this canal will be eminently subsidiary to the interests of Philadelphia. In addition to the sources of revenue on the Erie canal, all of which we possess to as great an extent, we shall probably derive full as much toll from iron and coals as from all other articles. And it appears that there is scarcely any coal and but little iron in New York; whereas, we possess inexhaustible supplies of both those invaluable articles. In the year 1824, there was no coal transported on the Erie canal, and only 1664 tons of iron castings. I have no memoranda for the last year.

Fulton.

Philadelphia, Jan. 31, 1826.

Philadelphia, Dec. 30, 1825.

His Excellency De Witt Clinton, Esq., Governor of the State of New York.

Dear Sir,

Knowing your zeal in the cause of internal improvement, I take the liberty to request answers to the following queries, which will be serviceable to our citizens in forming correct opinions on the subject of canals.

I. What is the usual load of a canal boat? What the greatest?

II. How many miles per day (twenty-four hours,) do the freight boats travel?

III. How many miles the common boats?

IV. How many men and horses to each?

V. What has been the expense per mile of the execution of the level parts of the route of your canal? Of those parts requiring deep cutting? At Lockport?

VI. Could such work be executed at present on more moderate terms?

VII. If so, at what average reduction?

VIII. What has been the amount of the canal funds for the past year? Of the tolls?

Answers to the above will oblige the Society for Internal Improvement, as well as

Your obedient humble servant,

MATHEW CAREY.

Sir, *Albany, 12th January,* 1826.

I have had the pleasure to receive your recent letter, and hasten to answer the queries which it contains, from the best information which I can procure in so short a time.

Query 1. What is the usual load of a canal boat? What the greatest?

Answer. The usual load of a canal boat is thirty tons—sometimes forty-five; more may be carried, but not advantageously.

Q 2. How many miles per day (twenty-four hours,) do the freight boats travel?

A. The freight boats which belong to the forwarding companies, with relays of horses every fifteen miles, usually travel day and night, say in twenty-four hours, sixty miles.

Q. 3. How many miles the common boats?

A. The common boats, or what are commonly called transient or private boats, (without relays of horses,) with the usual burden, say thirty tons, travel on an average twenty-five miles by day light, and lie by at night. When empty, they can travel easily thirty miles

Q. 4. How many men and horses to each?

A. To the day and night boats, four men, two boys, and two horses, or what is commonly called a double set of hands. To the transient boats, two men, one boy, and two horses; although they frequently use but one horse.

Q. 5. What has been the expense per mile of the execution of the level parts of the route of your Canal? Of those parts requiring deep cutting? At Lockport?

Q. 6. Could such work be executed at present on more moderate terms?

Q. 7. If so, at what average reduction?

These questions are very difficult to answer, as all the accounts of the expenditures are not as yet known; and indeed other objects have been so combined with the Erie canal, that it is difficult to arrive at a just conclusion. It was at first the policy of the Canal Board to do every thing by contract, and at definite prices; but this policy was finally overlooked; and under the head of extra compensation, such additions have been made from time to time to the sums stipulated in the original contracts, that it would employ an accurate accountant for a long time to trace the specific expenditures in such a way as to furnish the precise information you request in a satisfactory form.

The following statements are believed, however, to be approximations to accuracy. The middle section of the Erie canal, *ninety-six miles, cost about $12,000 per mile. The eastern section, eighty miles, from Utica to Schenectady, cost from* 17 to $18,000 *per mile. and from Schenectady to Albany, the expense was* $30,000 *per mile.* The western section, of which I have no accurate information, has been very expensive, particularly at Lockport, where there has been deep cutting through calcareous rocks. The distance from Buffalo to Albany, by the Erie canal, is now said to be three hundred and sixty-five miles. The whole expense of both canals and auxiliary works, is $9,130,378, from which deducting the cost of the Champlain canal, and other operations distinct from the Erie canal, the total cost of the Erie canal may be set down at seven and a half millions of dollars, which would make *about* $21,000 *per mile.*

I have no doubt but with our increased experience, and by more economical arrangements, particularly by the abolition of extra compensation, *the expenditures might be reduced about one-third in amount.* I think that the operations on the Ohio canal will fully justify this conclusion.

Q. 8. What has been the amount of the canal fund for the last year? Of the tolls?

A. The income of the canal fund for the last year was at least $800,000, of which 500,000[*] *arose from tolls. This year the tolls will, probably be above* EIGHT HUNDRED THOUSAND DOLLARS, *and may approximate to a million.*

I have, as soon as a great pressure on my time would permit, given you the above information. At a period of more leisure I would have gone more into detail. I hope that this statement may be satisfactory.

I am, very respectfully, &c.
DE WITT CLINTON.

M. CAREY, ESQ.

SIR, *Albany, 13th January*, 1826.

As a supplement to my letter of yesterday, permit me to state, that a more economical plan for carrying on an extensive freighting business on the Erie canal, has been proposed, and will probably be adopted

It is to employ three horses for each boat, one to be carried in the boat, and to be changed every two hours, which would give every horse two hours work, and a resting spell of two hours. A line of twenty boats could be formed, to start daily from Albany to Buffalo, or more frequently, if they did not make their trip to Buffalo, which would not always be required, as the cargo might be wholly destined for Utica, Rochester, or some other intermediate place.

This plan, for instance, would require twenty boats; three horses to each, would be sixty horses. Whereas the present lines of boats are formed thus: the distance from Albany to Buffalo, say three hundred and sixty-five miles—a relay of horses at least every fifteen miles—twenty-four relays at fifteen miles each are three hundred and sixty miles—four horses at each relay are ninety-six horses. In order to prevent breaches in the lines, and consequent delays, it further requires two horses to each boat, say forty horses for twenty boats, making one hundred and thirty-six, as indispensably necessary to form a complete line on the present system. Whereas by the improved plan, twenty boats, with sixty horses, will perform as much service during the season, and will actually travel the same distance: *a saving, therefore, of seventy six horses and twenty drivers, will be effected, independently of the expense of provender.* This plan will also have a beneficial effect in protecting the morals of the young men employed as drivers, who will always be under the eye of the masters of the boats, instead of remaining at stands for a considerable time, and indulging in dissipation.

There is no doubt but that other great improvements will be made in the rapidity and accuracy of transportation on our canal.

Respectfully, &c.
DE WITT CLINTON.

M. CAREY, ESQ.

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[*] Since this letter was written, a statement of the tolls has been published, which makes the amount about $20,000 dollars.

RURAL ECONOMY.

DEAR SIR, *Tarborough, N. C. Jan.* 8, 1826.

Much has been said in your valuable paper on the subject of boring for water—and the process described with sufficient minuteness for one who lived in a rocky country to commence operations; but I do not recollect to have seen any plan suggested which would enable the borer to penetrate through quicksands. I live in an alluvial country, not a rock of any description within any known depth; point of saturation from 12 to 20 feet below the surface, alternate strata of clay and sand, and frequently meet with quicksands in digging our wells. I presume the auger ought to be differently constructed from the one used in boring where rock was expected. There is faith enough in the theory, to commence boring for water, if there is any known means of getting through the quicksands. There are few countries more interested in the success of Mr. Disbrow's plan for getting water than this—for we have but few springs, furnishing only *surface water*, and our wells furnish but a scanty supply of miserable *swill* in summer. Your obed't serv't, W BELL.

LADIES' DEPARTMENT.

CONSERVATION OF RECENT FRUITS, BY MEANS OF SUGAR, IN A LIQUID STATE.

A great number of fruits in their natural state may be conserved in a fluid, transparent syrup, of such a consistence as will prevent them from spoiling. This method of conserving fruits requires some care; for if they are too little impregnated with sugar, they do not keep, and if the syrup is too concentrated, the sugar crystallizes and thus spoils the conserved fruit.

Method of conserving Apricots by means of sugar—Plums, Damsons, Green Gages, Peaches, Nectarines.

Take apricots, not too ripe, cut a small slit near the stem end of the fruit, and push out the stone; simmer them in water till nearly half done; then peel them, and simmer them again for about twenty minutes in a syrup made of two parts by measure of water, and one part by weight of loaf sugar. When this has been done, put them aside for about twelve hours; strain off the syrup, and to one pint of it add four ounces of lump sugar, simmer the fruit again for about ten minutes in this concentrated syrup; skim off the impurities that rise to the surface, and repeat the simmering of the fruit in the syrup three or four times; and lastly, put the apricots into pots, and cover them with a syrup made of seven ounces, by measure, of water, and one pound of loaf sugar; tie over or cork the jar to exclude the air.

Conserved Pine Apples.

Break off the top and stalk of the pine apple, cut the fruit into slices about one-fifth of an inch in thickness; put the slices into an earthen jar, at the bottom of which has been previously put a layer of powdered lump sugar, about one-eighth of an inch in thickness. Place on this stratum of sugar, a layer of the slices of the fruit, then put another layer of sugar, and so on; lastly, put the jar up to the neck into a saucepan of boiling water, and keep the water boiling for about half an hour, or till the sugar is completely dissolved, taking care to remove the scum that rises on the surface; tie over the mouth of the jar with a wet bladder, or keep it well corked.

Conserved Pears.

Put peeled pears in a stone pan with water; let them simmer till they are soft; skim them, and when cold simmer them for about ten minutes in a syrup made of three parts by measure, of water, and one by weight of loaf sugar; let them remain in the syrup till the next day; then pour off the syrup from the pears, simmer them again for about ten minutes, and repeat the simmering in the syrup three or four times successively. They are usually coloured red by powdered cochineal, a small portion of which is added during the boiling process. Some persons add cinnamon, and other spices, and a portion of port wine. If the pears be not intended to keep, they may be simmered till done in a syrup, composed of one pound of sugar and three pints and a half of water.

CONSERVATION OF RECENT FRUITS, BY MEANS OF SUGAR, IN A SOLID FORM.

The name of *candied fruits*, or *comfits*, is given to such substances as are preserved by means of sugar in a solid state, so that the whole substance is impregnated and covered with sugar, in a crystalline, or solid state.

Candied Orange, or *Lemon Peel.*

Soak Seville orange peel, well cleaned from the pulp, in several waters, till it loses its bitterness; cut it into thin slips, simmer them in a syrup composed of two parts, by weight, of lump sugar, and one of water, and continue the simmering till they are become tender, and nearly transparent. Then take them out put them aside for about twenty-four hours; and simmer them again in a sufficient quantity of a syrup composed of six ounces, by measure, of water, and one pound of loaf sugar, and continue the simmering till the sugar candies about the pan and peel. Now lay them separately on a wire sieve to drain; sift finely powdered sugar over them, whilst still hot, and put them to dry in a warm stove.

Candied lemon peel may be prepared in the same manner.

A REPLY TO THE BACHELOR'S SOLILOQUY.

BY A WIDOWER.

To wed, or not to wed? That is the question—
Whether 'tis nobler for human kind to fill
The world with pledges of virtuous love,
Or to oppose the laws of God and man,
And crowd the earth with spurious offspring?
To live, to love—yes, more, and have that love return'd,
Cures every heart-ache, and the thousand shocks

"Bachelors are heir to." 'Tis a consummation
Devoutly to be prized. To live. to love,
And have that love return'd is bliss complete!
For in that virtuous love what joys do come,
When we have shuffled off our daily toil,
Present themselves! There's the delight
That makes the wedded state so happy in this life.
To see the smiles, and hear the lisping notes
Of those sweet darlings of our virtuous love;
To trace the features, and behold in miniature
The object of our life, is life indeed—
To crown the whole—who would forego
That sweet communion—that intercourse of soul—
That social interest, and that wise economy,
Which reign predominant in the marriage state—
When he might all those blessings gain
By being married?
Who would not wish to bear
The pleasing name of husband—
Enjoy a fortune, reputation, health,
With cherubs sweet, and partner dear as life,
Than live in dissipation—puzzles not man,
But makes the Bachelor his titles change
For those fine names which now he only knows.
Thus matrimony shines conspicuous still,
And thus the fair one's resolution
Is still increased upon those virtuous thoughts.
[*Herald.*

MISCELLANEOUS.

Anecdote of the Plough in Ireland.

The obstinacy of prejudice among farmers, and the blind infatuation with which the ignorant adhere to old customs, is strongly illustrated in the following anecdote, related in Weld's Tour to Killarney, in Ireland. Most of our farmers have prejudices as inconsistent as those of Run, though few of them are sensible of the fact.

"At a place called Run, (says the tourist,) within Bantry Bay, the plough was absolutely unknown till the present clergyman introduced it: immense crowds immediately flocked down from the neighbouring mountains to see the novel instrument, and its operations were beheld with wonder. To those of his parishioners who were inclined to employ it in the cultivation of their grounds. the proprietor offered to lend it; and numerous applications were in consequence made. Shortly, however, the plough ceased to be in request; even the sight of it appeared to be cautiously shunned. That an instrument, productive of such an obvious and immediate saving of labour, should be thus discarded, seemed somewhat extraordinary; but to unravel the mystery was not difficult. The people had been reminded that their forefathers had *dug* the ground; that the plough was an *innovation*. An unanimous resolution was instantly made to follow the steps of their ancestors; every argument to the contrary proved ineffectual; and when we visited Run, the ground still continued to be cultivated with the spade!"

CURE FOR CANCERS.

Charles City Court House, Va. March 11, 1826.

Dear Sir,

In answer to an inquiry made in your paper in relation to the use of the narrow leaf dock in the cure of Cancers; I take pleasure in stating that a radical cure was effected by its application to a supposed cancer, with which Wm A. Harrison, late of Maycox, and the son of Carter B. Harrison, was afflicted. The root of the dock, (as well as I recollect) was boiled until it became quite soft, and was then used by way of poultice; a fresh application was made probably, three or four times during the day. This simple remedy produced an entire cure. I sincerely hope this information may be useful to the gentleman, to whose inquiry it is intended as an answer. Very respectfully, yours,

BENJAMIN HARRISON.

P. S I will make further inquiries on this subject, and if any additional information is procured, it shall be communicated through your paper.

Cotton—for Cordage or Sailcloth.

Navy Department, Jan. 31, 1826.

Sir,—In compliance with the resolution of the House of Representatives of the 25th inst. inquiring "whether any, and if any, what experiments have been made in the trimming and equipment of any of the vessels of the United States' navy, to test the utility of cotton for cordage or sailcloth; and also, what are the comparative strength and cost of such manufacture of that article and those of hemp." I have the honour to transmit herewith, a copy of a report, made by the commissioners of the navy upon the subject, which embraces all the information, in relation to the objects of inquiry, in possession of this department.

All which is respectfully submitted,

SAMUEL L. SOUTHARD.

The hon. the Speaker of the H. R.

Navy Commissioners' Office, Jan. 28, 1826.

Sir,—Upon the subject of the resolution of the House of Representatives of the 25th inst., which you were pleased to refer to this board, we have the honour to state that, in the month of May last we procured a quantity of cotton sailcloth, and directed it to be made into sails, to be used on board several of our public ships, with a view to test its relative strength and durability when compared with American and Russia flax or hemp canvass; but sufficient time to make a full experiment not having elapsed, no report as to the result has been received. With respect to the "comparative cost" of cotton canvass, the following shows the prices per yard at which we have contracted for flax canvass, and the prices asked for cotton canvass:

	Flax canvass.		*Cotton canvass.*	
No. 1,	47½	cts. per yard.	47	cts. per yard.
2,	43¾	do.	46	do.
3,	42½	do.	45	do.
4,	41¼	do.	44	do.
5,	40	do.	43	do.
6,	38 2-3	do.	42	do.
7,	37½	do.	41	do.
8,	36¼	do.	40	do.

The width of both is made for twenty inches, but, referring to the samples in our possession, the flax canvass is full one and a quarter inches wider than the cotton.

It has never occurred to the board, that it would be expedient to make any experiments of "cotton cordage," and we have no information upon the subject.

I have the honour to be, with great respect, your most obedient servant,

JACOB JONES,
Navy Commissioner.

Hon. Sam'l L. Southard,
Secretary of the Navy.

Census of the State of New York.

We have received from our Albany correspondent the official returns of the State Census, which was presented to the Legislature on Saturday last. To give them in detail would occupy more time and space than we could at present devote to it! The following is the grand total:

Total population - - - -	1,616,458
Males - - - - - -	822,897
Females - - - - - -	793,561
Persons subject to militia duty, and being between the ages of 18 and 45 years, - - - -	180,645
Persons qualified to vote at elections for state and county officers	296,132
Aliens - - - - - -	40,430
Paupers - - - - - -	5,610
Persons of colour, not taxed -	38,770
Persons of colour, who are taxed	931
Persons of colour who are taxed and qualified to vote at elections, for state and county officers -	298
Married female persons under the age of 45 years - - -	200,181
Unmarried female persons between the ages of 16 and 45 years -	135,391
Number of female persons unmarried, under the age of 16 years	361,624
Number of marriages the year preceding - - - - -	11,553
Number of male births, do. do. -	31,511
Number of female do. do. do.	29,869
Number of male deaths, do. do.	12,525
Number of female do. do. do.	10,019
Deaf and dumb persons, of which 141 are supported by charity -	645
Idiots, of which 442 are supported by charity - - - -	1,421
Lunatics, of which 184 are supported by charity - - -	819
Number of acres of improved land	7,160,967
Neat cattle - - - - -	1,513,421
Horses - - - - - -	349,628
Sheep - - - - - -	3,496,539
Hogs - - - - - -	1,467,573
Yards of fulled cloth, domestic manufacture, preceding year -	2,918,233
Do. flannel and other woollen cloths, not fulled - - - - -	3,468,001
Do. linen, cotton and other cloths, domestic manufacture -	8,079,992
Grist mills - - - - - -	2,264
Saw mills - - - - -	5,195
Oil mills - - - - - -	121
Fulling mills - - - - -	1,222
Carding machines - - -	1,584
Cotton factories - - -	76
Woollen factories - - -	189
Cotton and woollen factories -	28
Iron works - - - - -	170
Trip hammers - - - -	164
Distilleries - - - - -	1,129
Asheries - - - - -	2,105

[*New York American.*

From the Thomaston Register.

DAIRYING.

Mr. Editor—I was so well pleased with the idea of a dairy, or milk room, upon the plan of one which was recently described to me, that I am induced to make it public. The shelves are so constructed as to admit the immersion of a milk pan in cold water, nearly to the top, resembling a hollow trough. By the advantage of location, the water is constantly running from a spring into one end of the shelf and off at the other, and may easily be conducted from shelf to shelf throughout a whole room. The consequence is the milk keeps perfectly sweet, in the warmest season, until the cream is all risen, which is in a short time, of course the butter will be sweet. Now are there not hundreds of places that would admit of the same improvement with a trifling expense—which would be refunded four fold in one season.

And, sir, I will add a line from my own experience in churning. Be sure to put in sufficient of new milk to make your cream very thin: viz. put in equal or even double the quantity of milk, that you do cream; the consequence is, your butter is brought with less than half the labour, or time, and less liable to be white or striped, as the mess will be at all times thin, moves easily, and if it spatters up, it immediately runs down, so that the whole is equally moved, and all changes at once to good butter.

A LOVER OF GOOD BUTTER.

THE FARMER.

Baltimore, Friday, March 17, 1826.

☞This number closes the present volume, which we cannot allow to go abroad without an expression of sincere gratitude to the numerous friends who have contributed to give to the American Farmer, value and circulation. The Index and title-page will accompany the first number of the next volume. The Editor acknowledges, with pride, the belief that few papers in the Union are so punctually paid for, and he flatters himself it is because its patrons find in the communications of his numerous correspondents, something to amuse and instruct, not only in the operations of the field, but in the garden, and the family circle. A few subscribers, from various causes, will withdraw their names at the end of this volume: but it will be in the power, and we trust the disposition of the remainder, to supply their names by those of new subscribers. Let subscriptions commence when they may, we can supply back numbers to make the volume complete. We have one favour to ask, which we take pride in saying we have never asked in vain—to wit, that ☞payment be now made in advance for the ensuing volume, according to the terms of subscription.

☞A few complete sets of the American Farmer may be had on application to the Editor, who will cause them to be delivered to the purchaser free of expense of transportation.

☞The Trustees of the Maryland Agricultural Society will hold their next meeting at Eutaw, the residence of B. W. Hall, Esq., on Thursday next, the 23d of March, instant.

A NEW VEGETABLE FOR MARYLAND.—The Editor has just received and distributed two small boxes of "EDDOES, OR TANNIERS," from South Carolina. A notice of this vegetable, which is to us entirely new, will be found at page 197—the only account of it that we have seen. A few remain at the office of the American Farmer, to be shown to any gentleman who would like to see them. They are planted in South Carolina in the latter end of March, in beds or hills three or four feet apart—during the growth the earth is drawn up once or twice round the root, and the grass hoed from them. They are dug up before the heavy frosts commence, and put away in cellars, covered with straw and earth, as turnips are. They are excellent when eaten with butter. A rich mellow soil, inclining to moist, such as is generally found along declivities of land, just before it becomes wet and boggy, answers best for this vegetable. We hope careful trials will be made with the seed now distributed, and the results of them made known.

SHEEP.—The mutton of the forty-three sheep offered for sale this day by Mr Fow, in old shambles, weighs upwards of forty six hundred weight. The pork of one hog offered for sale at the same stall, weighs eight hundred and forty six pounds.

[*Phila.* [illegible]

[The three sheep of the pure New Leicester breed just received by the Editor from England, and now for sale, are from stock which would have given from forty-three sheep upwards of seven thousand pounds, at the same age, with the same keep.]

☞Every variety of fruit, and all the processes and objects of Horticulture, will be particularly attended to in our next volume, and a more particular account of the state of foreign markets, and a *summary* of the most leading events at home and abroad.

☞We have on file some valuable communications, from practical manufacturers, on wool and sheep, particularly those which have grown out of correspondence with such persons concerning the fine sheep of Ohio, and the Saxony breed, but so much has been lately published on these topics, that we must postpone these letters for some weeks.

☞Wanted information on the cause and cure of the distemper in dogs—a volume of the American Farmer will be awarded to the author of the best communication on the subject.

☞A law was passed at the late session of the legislature, to build or purchase tobacco warehouses in Baltimore. As yet, no reduction is provided for in the expense of *inspecting tobacco;* but there is no doubt they will be reduced after the houses are paid for by the State. The impression is, that it will be a great saving to the State, to build or purchase, instead of renting.

GARRICK.

An imported *full bred* Devon Bull, will stand this spring at the first Toll Gate, on the Baltimore and Harford Turnpike road, two miles from the city, and be let to Cows at five dollars each, the money *in every instance* to be sent with the Cows, and for which a warranty is given.

Garrick was purchased from the celebrated stock of Mr. Childes near Bewdley, Worcestershire, who has for several years been the most extensive and successful breeder of North Devon cattle in England, and Garrick was acknowledged to be his best yearling at the public sale in September, 1824. He was by Prize out of Fill Pail, as per catalogue and pedigree which accompanied him.

Garrick took the highest prize at Easton Cattle Show last fall; he is now in fine order, and pronounced by all who have seen him to be a very superior animal, and the heaviest of his age in this country being only two and an half years old, and actually weighs [illegible] pounds.

JOHN BROWN, *Gate Keeper.*

N. B. Applications having been made from different parts of the country for the services of Garrick, and his stock being now well established he will be offered for sale (if not previously engaged) at the approaching cattle show in June next; at which time some young full bred Devons, warranted pure blood) may also be obtained. If further particulars are required, apply as above, per mail, post paid.

March 15th, 1826.

[☞For fineness of bone, compactness of form, and more especially for rich yellowness of skin, which is one of the strongest signs of superiority in this race of animals, Mr. Thompson's Bull is highly distinguished [Ed. Am. Farm.]

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PRICES CURRENT.

ARTICLES.	per.	WHOLESALE. from	WHOLESALE. to	RETAIL. from	RETAIL. to
BEEF, Baltimore Prime,	bbl.	8	8 25		
BACON, and Hams, . .	lb.	7	9	8	12
BEES-WAX, Am. yellow	—	33	34	40	50
COFFEE, Java, ...	—	16	17	22	25
Havana, ...	—	15	17	18	20
COTTON, Louisiana, &c.	—	15	17		
Georgia Upland, . . .	—	13	15½		
COTTON YARN, No. 10,	—	33			
An advance of 1 cent	—				
each number to No. 18.	—				
CANDLES, Mould, . .	—	12	12½	14	16
Dipt, ...	—	10	11	[illegible]	12½
CHEESE, ...	—	8	10	12	[illegible]
FEATHERS, Live, . . .	—	32	33	37	
FISH, Herrings, Sus.	bbl.	2 75	3 00	5 00	
Shad, trimmed,	—	6		8	
FLAXSEED, Rough, . .	bush	90		1 00	
FLOUR, Superfine, city,	bbl.	4 25	4 37	5 50	6 25
Fine, ...	—	4	4		
Susquehanna, superfi.	—	4 12	4 25	5 00	
FLAX, ...	lb.	9	11		
GUNPOWDER, Balti. .	25 lb	5 00		5 50	
GRAIN, Indian Corn, .	bush	72	75		
Wheat, Family Flour,	—	1 00	1 05		
do. Lawler, ...	—	75	80		
do. Red, ...	—	80	85		
do. White Flint, . .	—	2 00			
Rye, ...	—	60	62		
Barley, ...	—	90	95		
Clover Seed, Red . .	bush	3 75	4 00	5 00	
Ruta Baga Seed, . . .	lb.	1			
Orchard Grass Seed,	bush	1 75		2 00	
Mangel Wurtzel Seed,	—	1 25		1 50	
Timothy Seed, ...	—	2 25		2 50	
Oats, ...	—	40	42	45	
Beans White, ...	—	1 50		1 75	
HEMP, Russia, clean, .	ton	215	220		
Do. Country	—	120	130		
HOPS, ...	lb.	27	30	37	50
HOGS' LARD, ...	—	9	9½	12	
LEATHER, Soal, best,	—	24	25		
MOLASSES, sugar-house	gal.	45		62	75
Havana, 1st qual. . .	—	25	26½	37½	
MEAL, Corn, kiln dried,	bbl	3 00	3 25	3 75	
NAILS, 6a20d.	lb	7		8	
NAVAL STORES, Tar,	bbl.	1 75			
Pitch, ...	—	2			
Turpentine, Soft, . .	—	2 00			
OIL, Whale, common, .	gal.	30		40	50
Spermaceti, winter .	—	70		88	1 00
PORK, Baltimore Mess,	bbl	12 50			
do Prime, . . .	—	9 75	10 00		
PLASTER, cargo price,	ton.	5 25			
RICE, fresh, ...	lb.	3		5	6
SOAP, Baltimore White,	lb.	12	14	16	20
Brown and yellow,	—	5½	7	8	12
WHISKEY, 1st proof, .	gal.	26	26½	[illegible]	50
PEACH BRANDY, 4th pr	—	75	1 00	1 25	none
APPLE BRANDY, 1st pr	—	37½		50	none
SUGARS, Havana White,	c.lb.	13 50		15	16
do. Brown, . .	—	9 50	10		
Louisiana, ...	—	7 80	9 60	10	11
Loaf, ...	lb.	19	22	20	23
Lump, ...	—	16	18	20	
SPICES, Cloves, ...	—	78		1 00	
Ginger, Ground, . . .	—	7		12	
Pepper, ...	—	17		25	
SALT, St. Ubes, ...	bush	46	48		
Liverpool Blown . .	—	53	55	75	
SHOT, Balt. all sizes, .	cwt.	9 50		12 50	
WINES, Madeira, L. P.	gal.	2 50	3 00	3 50	4
do. Sicily, . .	—	1 20	1 30	2 00	
Lisbon, ...	—	1 15	1 25	1 50	1 75
Claret, ...	doz.	4	8	5 00	9 00
Port, first quality, . .	gal.	1 50	2 00	2 50	
WOOL, Merino, full bl'd	lb.	35	40	unwashed, but free of tags.	
do. crossed, . .	—	28	30		
Common, Country, .	—	25			
Skinners' or Pulled,	—	33	35		

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